NAVAL POSTGRADUATE SCHOOL
Monterey, California

THESIS

COMPARATIVE ANALYSIS OF MULTIPLE-AWARD TASK ORDER CONTRACTING AND ITS IMPACTS ON ACQUISITION REFORM

by

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December 2002

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Present procurement practices for purchase of commercial, commercial off-the-shelf, and non-developmental products and services take thirty days and sometimes years to procure and deliver to the end user. Federal Government contracting offices spend costly amounts of time advertising the action and preparing formal solicitation documents for each purchase order generated by the end user. This translates to high administrative costs, high prices and, at times, marginal performance. This research offers alternative procurement practices through a single award indefinite delivery, indefinite quantity contract accessed through an advanced electronic system, which is maintained in accordance with commercially established practices. Further comparisons are made with the growing popularity of multiple-award contracts as these procurement instruments affect competition, pricing and socio-economic issues.

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ABSTRACT

Present procurement practices for purchase of commercial, commercial off-the-shelf, and non-developmental products and services take thirty days and sometimes years to procure and deliver to the end user. Federal Government contracting offices spend costly amounts of time advertising the actions and preparing formal solicitation documents for each purchase order generated by the end-user. This translates to high administrative costs, high prices, and at times marginal performance. This research offers alternative procurement practices through a single award indefinite delivery, indefinite quantity contract accessed through an advanced electronic system, which is maintained in accordance with commercially established practices. Further comparisons are made with the growing popularity of multiple-award contracts as these procurement instruments affect competition, pricing and socio-economic issues.

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I would first like to give honor and homage to my creator for sustaining me during this dynamic learning experience. I share all my success with my lovely wife, whom I adore, and give thanks for her patience and understanding during this journey. Lastly, I would like to thank Dr. Ron Tudor for the vote of confidence and for accepting me under his wing as a pupil of his project.

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I. INTRODUCTION

A. THE PROBLEM

Current purchases of commercial off-the-shelf-items (COTS) and non-developmental items and services, such as spare parts or grounds maintenance, can take up to two years to procure and reach the end users. These procurement administrative lead times (PALT), the yard-sticks by which contracting activities are graded, are lengthy as a result of the Government's inability to capture the efficiencies of proven commercial practices. Legislation through the Federal Acquisition Streamlining Act of 1994 (FASA), which redefined commercial purchasing, and the Federal Acquisition Reform Act of 1996 (FARA), later renamed the Clinger-Cohen Act, reshaped how the Government interacted with industry to purchase supplies and services.

Using electronic commerce and electronic data interchange systems, the Government discovered innovative ways to streamline procurement business practices, thereby reducing PALT. The creation of Multiple Award Task Order Contract instruments (MACs), familiarly known as Indefinite Delivery, Indefinite Quantity Contracting Instruments or IDIQs, has also changed the way contracting agencies buy supplies and services, reduced PALTs and implemented FASA and FARA. However, MAC instruments have come under legislative and commercial scrutiny by Congress, the Department of Defense Inspector General (DoD IG), the National Aerospace Space Agency Inspector General (NASA IG), and the Small Business Administration (SBA). Misuse

of these contracting tools has had a negative impact on competition, pricing and socio-economic goals.

B. THE PROPOSED SOLUTION

This research explores the use of an advanced electronic purchasing system. This electronic system will increase the effectiveness of IDIQs, generate more competition, and take advantage of market efficiencies or best practices to maximize competition without overly regulating the process. Furthermore, this advanced electronic system should reduce PALT to near zero, increase performance, influence best value pricing, while surpassing socio-economic goals and reducing Government aggregate expenditures.

C. WHAT IF THE PROBLEM IS NOT SOLVED

On the horizon, the Acquisition Law Advisory Panel, commonly referred to as the Section 800 Panel, has proposed two Defense Authorization Bills, Section 801 and Section 803. Section 801 will mandate the oversight of a MAC Czar to enforce the potential legislation. Section 803 threatens to impose more competition on MACs for purchases over $100,000. This means that if DoD fails to receive the minimum number of bids to satisfy the rule, DoD may have to compete the actions under full and open competition rules. Sixty billion dollars were spent last year through MACs, and there would be potentially 600,000 procurement actions to perform the same functions. (Dembeck, Federal Times, May 2002) The result, if the competition rules on MACs are changed, will be increased costs, over burdened workforces, and higher prices for the Government.

D. DISCUSSION

The vision of the Federal Acquisition System has always been to:

> Deliver on a timely basis the best value product or service to the customer, while maintaining the public's trust and fulfilling public policy objectives. Participants in the acquisition process should work together as a team and should be empowered to make decisions within their area of responsibility. (See Federal Acquisition Regulation Part 1)

The Office of the Federal Procurement Policy, and Office of Management and Budget Executive Office of the President, concluded that since the passing of the Federal Acquisition Streamlining Act of 1994 (FASA), all Federal Departments and Agencies have begun initiating procedures to determine contractor past performance information in source selection. The FASA states:

> Past contract performance of an offeror is one of the relevant factors that a contracting official of an executive agency should consider in awarding a contract. It is appropriate for a contracting official to consider past contract performance of an offeror as an indicator of the likelihood that the offeror will successfully perform a contract to be awarded by that official. (DAD, Best Practices, 2000)

Furthermore, recording a contractor's performance information periodically during the performance of a contract is a strong motivator for contractors to maintain high quality performance or improve inadequate performance before the next reporting cycle. This is a basic ingredient of "best practices" for good contract administration, and is one of the most important tools for

ensuring contract performance, while also ensuring best value for the Government.

Since the inception of FASA, contract vehicles have been created to streamline lengthy procurement procedures, which have contributed to long waiting periods for procurements and bidding periods. These waiting periods incur an extensive administrative overhead cost that is eventually passed on to the Government. Particularly, multi-award task order contract instruments (MACs), such as the Government-wide acquisition contracts (GWACs), have been developed to procure information technology supplies and services while becoming the center of attention since FASA. GWACs serve two important purposes. The first is to spread the use of multiple-award task order or delivery order contracting authorized in FASA, which has decreased procurement acquisition lead time clocks (PALT) using Federal Acquisition Regulation Part 14 and 15 procurement actions. The second is to promote the spread of best practices that promise better results from information technology investments. (Kelman, 1999)

In fiscal year 2000, purchases made through GWACs rose to more than $13 billion dollars. This is within a mere six years from when they were authorized, and they continue to gain popularity according to an exhaustive study by Fed Sources Inc., a technology market analysis firm headquartered in McLean, VA. (Harris, August 27, 2001) Although GWACs are focused primarily on Information Technology (IT) services and equipment, these contract vehicles have allowed agencies to issue task and delivery orders against other multiple-award schedules via a

percentage fee, instead of having to initiate new contracts. They offer a way to avoid complicated and lengthy processes of open competition and contract negotiation. However, GWACs have come under scrutiny due to an increase in sole-source awards without full and open competition, and have become a source of controversy among small business advocates because of contract bundling.

This research involves a detailed description and analysis of MAC instruments by considering whether MACs support the "best practices" that obtain performance-based contracts. Furthermore, it addresses whether Government agencies are properly competing these contracts to meet the requirements outlined in Parts 6 and 16 of the Federal Acquisition Regulation, as well as fully supporting the Government's socioeconomic initiatives. Finally, by demonstrating the benefit of an advanced electronic system, the researcher introduces business alternatives that can achieve the best value for the Government.

E. RESEARCH QUESTIONS

1. Primary Research Question

- What are the current acquisition problems and issues associated with current procurement practices of MAC instruments to meet the requirements of competition, provide best value prices and meet socio-economic goals? To what extent can an advanced electronic system improve on those procurement problems and issues?

2. Secondary Research Questions

- Why have Government-wide Acquisition Contracts (Type of MAC or GWAC) become the procurement tool of choice for a plethora of Government agencies?
- Why has the misuse of these GWACs become a political target for Congress and the Small Business Administration (SBA)?

- What advantages/solutions can an advanced electronic system bring to the current procurement system and Acquisition Reform?

F. SCOPE OF THESIS

The scope includes: (1) a background review of fundamental policy changes supporting acquisition reform that led to the development of MACs; (2) an examination of economic problems associated with poor purchasing discipline and incentives, which have led to shoddy procurement activities and unintended consequences; (3) how a pure electronic purchasing system can address the identified problems of the current purchasing practices; and (4), additional political issues and concerns associated with the need for an advanced electronic procurement system.

G. METHODOLOGY

The methodology used in this thesis research consists of the following steps.

- Conduct a comprehensive literature search of books, magazine articles, CD-ROM systems, and Internet based materials.
- Conduct a comprehensive review of Government reports concerning issues with MACs addressed by Small Business Administration (SBA), GSA, Government Accounting Office (GAO), DoD Inspector General (IG) and NASA IG.
- Conduct visits to and interviews with contracting offices, SBA and their associated programs and offices, GSA and key personnel associated with the development of an advanced electronic system during the program development and program beta testing.
- Conduct portal modeling of MAC procurement behavior and impacts as outlined in the DoD IG, GAO and NASA IG findings on MAC activity.

- Conduct a cost-benefit analysis or evaluation of using the advanced electronic system as a key procurement vehicle.

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II. BACKGROUND

A. DEFINITIONS

1. Best Value

Best value means the expected outcome of an acquisition that, in the buyer's estimation, provides the greatest overall benefit in response to the requirement. (NCMA Pub, 1998)

2. Bundling

Consolidating requirements is the process of awarding large umbrella contracts and eliminating numerous smaller contracts. (GAO, 1998)

3. Competition Policy

"10 U.S.C.2304 and 41 U.S.C.253 require, with certain limited exceptions (see Subparts 6.2 and 6.3), that contracting officers shall promote and provide for full and open competition in soliciting offers and awarding Government contracts.

"Contracting officers shall provide for full and open competition through use of the competitive procedure(s) contained in this subpart that are best suited to the circumstances of the contract action and consistent with the need to fulfill the Government's requirements efficiently (10 U.S.C.2304 and 41 U.S.C.253)." (FAR Part 6)

4. Consideration Policy

"The contracting officer must provide each awardee a fair opportunity to be considered for each order exceeding $2,500 issued under multiple delivery-order contracts or multiple task-order contracts, except as provided for in paragraph (b)(2) of this section. Paragraph (b)(2) exceptions are: (i) The agency need for the supplies or

services is so urgent that providing a fair opportunity would result in unacceptable delays; (ii) Only one awardee is capable of providing the supplies or services required at the level of quality required because the supplies or services ordered are unique or highly specialized; (iii) The order must be issued on a sole-source basis in the interest of economy and efficiency as a logical follow-on to an order already issued under the contract, provided that all awardees were given a fair opportunity to be considered for the original order; or (iv) It is necessary to place an order to satisfy a minimum guarantee." (FAR, Part 16.5)

5. Federal Acquisition Reform Act/Clinger-Cohen Act (FARA)

The Clinger-Cohen Act of 1996 (formerly known as the Federal Acquisition Reform Act of 1996 (FARA)) and the Information Technology Management Reform Act of 1996 (ITMRA) further advance the changes made by FASA. The Clinger-Cohen Act provides a number of significant opportunities for DoD to further streamline and reduce non-value added steps in the acquisition process. Among the most significant changes authorized by the Act is a test of the use of the Simplified Acquisition Procedures (SAP) for commercial items between the simplified acquisition threshold of $100,000 and $5 million. This should allow DoD to reduce its administrative costs and the overhead costs for DoD's vendor base for purchases of relatively low risk items. This change eliminated Government-unique requirements previously cited by industry as a barrier to doing business with DoD. The Act also provides the authority for contracting activities to use SAPs for all

requirements between $50,000 and the SAP while the Government works to fully implement Electronic Commerce/ Electronic Data Interchange (EC/EDI).

6. Federal Acquisition Streamlining Act (FASA)

On January 25, 1994, the 103rd Congress passed Senate Bill 1587, the Federal Acquisition Streamlining Act of 1994, which President Clinton signed into law. Running over 74,000 words, this bill streamlines the acquisition process by: (1) replacing the existing "small purchase threshold" of $25,000 with the "simplified acquisition threshold" of $100,000; (2) creating the category of the "micro-purchase", with some powerful implications for purchases below $2,500; and (3) mandating that the Federal Government create a network for spreading electronic commerce. (Federal Mall)

7. MULTIPLE AWARD INDEFINITE DELIVERY INDEFINITE QUANTITY CONTRACT (IDIQ)

A multiple award IDIQ contract allows agencies to award multiple task and delivery orders covering the same scope of supplies or services and award orders for specific work after giving each contract holder a fair opportunity to be considered. These MACs can be made available to other Government agencies, especially those offering information technology (IT) products and services in the form of Government-wide acquisition contracts (GWACs). Multi-agency use comes pursuant to the Economy Act. Also, the scope of a multi-agency contract need not be limited to IT.

8. Procurement Administrative Lead Time (PALT)

This period of time begins when a complete and valid procurement request is received in the contracting office,

and ends when the acquisition is awarded and complete distribution of the contract document has been made. PALT standards, in calendar days, for processing actions are as follows: (DAD, NGFARS Part 7.105)

Table 1. Procurement Administrative Lead Time Chart.

REQUIREMENT	<=$2.5K	$2.5K-$25K	$25K-$100K	>$100K
EDI	15	15	15	None
SUPPLIES	15	30	60	120
SERVICES	15	45	90	180
CONSTRUCTION	15	60	120	180
A-E	15	60	120	180

9. Sole-Source Procurement

Sole source acquisition means a contract for the purchase of supplies or services that is entered into by an agency after soliciting and negotiating with only one source. The following criteria authorize the Government to justify sole-source procurements: (DAD Information Guide, Volume II, 1998)

- Patents, data rights and copyrights
- Only one responsible source and no other supplies or services will satisfy agency requirements
- Unique capabilities, supplies or services available from only one source
- Unusual and compelling urgency
- Industrial mobilization requirements

- International agreement(s)
- Requirement by statute
- Public interest

B. CURRENT PROCUREMENT PROCESS

Acquisition of commercial items over the micropurchase price of $2,500 can take up to thirty days, and purchases over $100,000 can take up to a year to receive. Acquiring non-developmental items such as submarines, ships, or aircraft repair parts can take up to two years in extreme cases. Government services contracts, such as military housing refurbishing, grounds maintenance or janitorial services, etc., have taken up to three years to award.

"The generic contracting process starts with a customer inputting data into an automated purchase request system (APRS). This request is automatically/electronically sent to the fund's administrator in the comptroller's office, who approves the request and assigns a line of accounting (LOA) to the request. APRS obligates the necessary funds for the acquisition and automatically updates the Defense Financing Accounting System (DFAS). Once it is determined that the purchase request requires a contracting action, the contracting officer (KO) ensures there is enough information in the requirement to properly compete the acquisition among potential offerors in the open market. If the request requires clarification, the KO provides feedback to the customer on the information that is required to complete the acquisition. The KO must also determine if the acquisition should be set aside for purchase from certain sources such as small, disadvantaged,

minority, or women owned businesses. The KO generally determines the method of procurement for the purchase request and assigns the request to a contract specialist for contract formation. The contract specialist inputs the purchase request into the Standard Procurement System (SPS). SPS is an automated computer system that assists contract specialists in contract preparation. The contract specialist determines the extent of competition for the acquisition and develops a potential source list.

"The contract specialist then prepares a synopsis and solicitation for the acquisition. The synopsis and solicitation are sent via SPS to the KO for approval. Once the KO has approved the synopsis/solicitation, the contract specialist publicizes it by mailing, faxing, or e-mailing it to companies on the potential sources list, and by posting it to the Federal Business Opportunities (FBO) website. Potential offerors receive the solicitation and provide feedback in the form of pre-award inquiries to the contract specialist for clarification. The contract specialist then receives proposals from potential suppliers and builds proposal abstracts in SPS. The contract specialist evaluates all proposals and selects the best value proposal. The contract specialist enters the pertinent information, e.g., clauses, terms and conditions, amounts, etc., directly into SPS. SPS automatically produces a Form 1149 and all supporting contracting documents. SPS also automatically updates DFAS with all pertinent contract information. The KO awards the contract in SPS and the contract specialist distributes the contract award by e-mail, fax, or mail to the comptroller, customer, and the contract awardees. Once the contractor receives

the contract award document, the contract is then signed and mails it back to the KO, where it is received by the contract specialist and the document is filed in the contract file, thus completing contract award.

"If the acquisition is for a supply item, the contractor produces the item and sends it and the payment invoice to location(s) specified in the contract. If the acquisition can be paid for by a Government credit card, the contract specialist phones the contractor and provides the credit card number for payment. If the acquisition requires payment using a check, the contract specialist mails the certified payment invoice to DFAS. DFAS then verifies the payment invoice by comparing it with the original contract information it received through SPS. DFAS in turn mails a check to the contractor and posts the payment voucher number to the DFAS website. The contract specialist checks the website to confirm that the voucher number is posted and then closes out the contract." (Harrigan, Sean, 2001)

C. OVERVIEW OF FASA AND FARA

Prior to FASA, agencies used large single award (umbrella) ID/IQ contracts to avoid: (1) delays associated with awarding several individual contracts for each requirement and re-competing Government contracts, and (2) the legal challenges of using multiple award contracts. A single award ID/IQ contract often makes it difficult for the Government to secure the same price reductions and contractor performance improvements that can occur if the contractor were competing against other qualified contractors throughout the contract.

The Acquisition Law Advisory Panel, in its 1993 report to Congress, concluded that many Government requirements would be unnecessarily delayed unless agencies had the clear flexibility to enter into delivery order contracts for products and task order contracts for services. These contracts allow detailed requirements, definite dollar values, and the timing of work to be accomplished by issuing orders as needs arise during the life of the contract. The Panel recommended that task order and delivery order contracts be authorized by statute.

Congress recognized that significant procurement reforms could not be accomplished without providing agencies flexible contracting tools. Therefore, FASA provided this flexibility by codifying agencies' existing practices of using task order and delivery order contracts, established a "general" preference for use of multiple awards, and made the use of multiple awards mandatory for advisory and assistance services contracts exceeding $10 million and three years in duration. (ARNET ,2001)

1. FASA

The Federal Acquisition Streamlining Act of 1994 significantly changed how the Government does business. As part of Vice President Gore's effort to create a "Government That Works Better and Costs Less" within his National Performance Review, he presented FASA to President Clinton in 1993. It was designed to overhaul the cumbersome and complex procurement system of the Federal Government, which required costly paperwork for even small purchases and weeks, sometimes months, of waiting between order and delivery of goods.

The Federal Acquisition Streamlining Act (FASA) was signed in to law Oct. 13, 1994. Some highlights of FASA include:

Eliminating most paperwork and record keeping requirements for acquisitions below $100,000 within the Simplified Acquisition Threshold (SAT).

Allowing direct “micropurchases” of items below $2,500 without competitive quotations or compliance with Buy American Act and certain small business requirements.

Exempting commercial product procurements from certain existing as well as future enacted laws, including exemptions from the submission of cost or pricing data and the cost accounting standards (CAS) requirements; establishing an agency preference for commercial items; and other continuing initiatives promoting the acquisition of commercial items to minimize time delays, research and development, and detailed design specifications and testing, thereby making Government procurement easier and less costly.

Establishing a Government-wide Federal Acquisition Computer Network (FACNET) to convert a current acquisition process overburdened by paperwork to an expedited electronic data interchange system (EDI) readily accessible to the public. The National Defense Authorization Act of 1998 repealed the FACNET requirement, changing it to the use of Electronic Commerce/Electronic Data Interchange (EC/EDI).

Establishing a six-year limitation period for filing claims under the Contract Disputes Act (CDA) and increasing dollar thresholds for claim certification and the accelerated and small claims procedures.

Reserving all acquisitions over $2,500 but under $100,000 exclusively for small business concerns, unless the contracting agency is unable to obtain offers from at least two qualified small business

firms.

Expanding the Small Disadvantaged Business set-aside program to civilian agency procurements. As a result of the Adderand decision, the set-aside program has since been refined. It now includes closer scrutiny rather than a blanket policy on selection. Criteria for selection also identifies hub zones -historically under-utilized business and economic areas.

Establishing a new 5 percent contracting goal for women-owned small businesses.

Creating a “Small Business Procurement Advisory Council” comprised of representatives from federal agencies, which will give high-level attention and focus to small businesses.

Preserving private contractors’ ability to file bid protests in the U.S. District Courts and authorizing federal district courts to obtain advisory opinions from boards of contract appeals.

Improving bid protest and contract administration procedures, particularly by providing more timely and informative debriefings to unsuccessful offerors; establishing Government-wide payment protection for first-tier subcontractors and suppliers; and extending the authority to use alternative dispute resolution procedures under the CDA until October 1, 1999.

Repealing that part of the Walsh-Healey Act requiring an offeror to certify that it is a regular dealer or manufacturer.

Requiring evaluation of past performance before contract award.

Raising the Truth in Negotiation Act (TINA) threshold for requiring certified cost or pricing data to a uniform $500,000 for both civilian agencies and DoD procurements.

Some of the items listed above have changed since

the law was passed in 1994. This list merely reflects the initiatives of FASA. (DSMC, 2001)

2. FARA

In 1996, recognizing the importance of information technology for effective Government, Congress and the President enacted the Information Technology Management Reform Act and the Federal Acquisition Reform Act. These two Acts together, known as the Clinger-Cohen Act, require the heads of Federal agencies to link IT investments to agency accomplishments. The Clinger-Cohen Act also requires that agency heads establish a process to select, manage and control their IT investments.

According to the former Under Secretary of Defense for Acquisition and Technology, the Honorable Paul G. Kaminski,

> The Clinger-Cohen Act of 1996, formerly known as the Federal Acquisition Reform Act of 1996 (FARA) and the Information Technology Management Reform Act of 1996 (ITMRA), further advance the changes made by FASA. The Clinger-Cohen Act provides a number of significant opportunities for DoD to further streamline and reduce non-value added steps in the acquisition process. Among the most significant changes authorized by the Act is a test of the use of the Simplified Acquisition Procedures (SAP) for commercial items between the simplified acquisition threshold of $100,000 and $5 million. This should allow DoD to reduce its administrative costs and the overhead costs for DoD's vendor base for purchases of relatively low risk items. This change eliminated Government-unique requirements previously cited by industry as a barrier to doing business with DoD. The Act also provides the authority for contracting activities to use SAPs for all requirements between $50,000 and the SAP while the Government works to fully implement Electronic Commerce/Electronic Data Interchange (EC/EDI).

> The Clinger-Cohen Act also provides substantial relief from cumbersome processes that add little value, but significant cost to the acquisition of information technologies. The passage of the Act allows DoD to focus on the appropriate use and management of information technology resources. It should also reduce the amount of time an information technology acquisition takes by reducing the number and frequency of protests, while moving the Department in the direction of the use of sound acquisition strategies. (DSMC 2001)

C. BEST PRACTICES AND ACQUISITION REFORM

As a result of FASA, the Office of Federal Procurement Policy published the following guidance for "Best Practices" for Multiple-award Task Order Procurements:

> During acquisition planning, COs, program officials, and industry should work together to develop a clear statement of work.
>
> Continuously seek contractor input to improve the efficiency and effectiveness of the ordering process.
>
> Make a reasonable number of awards, which ensures competition but keeps the ordering process from being overly burdensome.
>
> Use an interactive solicitation development process to:
>
> Shorten RFP development from months to days;
>
> Increase communication between industry and Government;
>
> Increase understanding of the requirements through a dynamic interactive approach; and
>
> Use simplified procedures and award documentation when issuing orders under multiple award contracts.
>
> The use of performance-based work statements

should result in more task orders being fixed-priced.

Consider using oral presentations to reduce lead time and contractors' proposal preparation costs. Use good judgment to ensure that travel costs do not become excessive.

Plan ahead for oral presentations to allow sufficient time for scheduling of conference room space and evaluators attendance.

If written technical proposals are required, use page limitations.

Developing publications which describe the fair opportunity and ordering process helps when multiple award contracts are issued for multi-agency use.

Past performance on earlier tasks under the multiple award contract, including past performance on cost or price control, may be used to determine which awardees should be considered for future tasks.

Good communication between the contracting office and program/technical office is essential when determining fair opportunity.

Technical/program personnel involved in the fair opportunity process should be well trained in the use of multiple award task and delivery order contracting.

Establishing an automated system to manage task order issuance makes the process more efficient.

Convene periodic meetings with awardees to discuss administrative matters, future requirements, and needed improvements in the ordering process.(Acquisition Reform Network Dec 2001)

D. MAC POPULARITY

Government Wide Acquisition Contracts (GWACs) are one of many multiple-award task order or delivery order contract instruments, which have attempted to streamline lengthy procurement processes. Particularly, GWACs were designed to provide sources primarily for information technology products through contracts that are owned by one Federal agency, which other specified Federal agencies can use. There is a limitation on how much of the total contract value one agency can use. This amount varies and is determined by the host agency. GWACs allow agencies to issue task and delivery orders against other agencies' multiple-award contracts. In essence, GWACs offer agencies a way to avoid the complicated and lengthy process of open competition and contract negotiation, which have, in the past, contributed to long waiting periods for procurements and bidding periods. These waiting periods incur extensive administrative overhead costs that are eventually passed on to the Government. In fact, administrative costs have been estimated to be approximately $25,000 per contract transaction. (Dembeck, Chet 2002)

Since 1996, when the National Institutes of Health and the Transportation Department invented the GWAC, it was hoped that the GWACs would serve two purposes. The first was to spread the use of multiple-award task order contracting authorized in the Federal Acquisition Streamlining Act to facilitate commercial competition in the Government to procure IT services. The second was to promote the spread of best practices. Purchases made through GWACs skyrocketed to more than $13 billion in fiscal year 2000.

More than twelve agencies operate GWACs. Federal Sources Inc., analyzed 95,000 task and delivery orders for information technology orders placed against sixty GWACs. This analysis showed that the Federal Supply Service's (FSS) technology schedules by far accounted for the largest portion of the GWAC's income in fiscal year 2000. The technology schedules amassed nearly $8.1 billion in sales with 60.8 percent of all activity. FSS charges agencies a one percent fee generating over $81 million in revenue for the agency. The General Services Administration's (GSA) new Broadband Distance Learning contract ran a distant second with $1 billion in sales. GSA manages five of the ten most lucrative contracts. The National Aeronautical Space Administration's (NASA) Scientific and Engineering Workstation Procurement II (SEWP II) Contract, which is used to purchase computer equipment designed for open source environments, came in fourth with $451 million, or 3.4 percent of the total sales. According to the study by Fed Sources Inc., the top 10 GWAC agency users accounted for more that $11 billion, or 85 percent, of the entire GWAC market. GSA is also the largest GWAC customer, spending $4.2 billion, or accounting for 31.2 percent of the purchases. The Navy followed at 13 percent for purchases, or $1.7 billion, and the Army was third with 12.6 percent of the purchases worth $1.6 billion (Figure 1).

	Top Users	
Department	Contract Total	Percent ofTotal
1 GSA	4.2 billion	31.2%
2 Navy	1.7 billion	13.0%
3 Army	1.6 billion	12.6%
4 Air Force	1.4 billion	10.3%
5 DISA	540.5 million	4.1%
6 Treasury	489.7 million	3.7%
7 Justice	390 million	2.9%
8 DLA	376 million	2.8%
9 VA	326.6 million	2.5%
10 NASA	289 million	2.2%
All others	1.9 billion	14.4%
Total	13.3 billion	100.0%
Based on contract ogligations for fiscal 2000. Source: Federal Sources Inc.		

Figure 1. Fiscal Year 2000 Contract Obligations Captured by Federal Sources Inc.

GWAC customers not in the top 10 accounted for only 14.4 percent of sales, or $2 billion.

On the contractor side, technology management adviser EDS of Plano, Texas was the largest single GWAC contractor with $726 million in business, representing 5.4 percent of the market share. Los Angeles-based defense contracting giant Northrop Grumman came in second at $657 million, or 4.9 percent. Technology firm SAIC, headquartered in San Diego, rounded out the top three, tallying $655 million in sales to put it nearly even with Northrop Grumman for market share. Companies not in the top ten list of contractors accounted for 65 percent of all spending, which amounted to $8.7 billion.

GWAC supporters, such as GSA and FSS, defend the use of these contracts by stating that GWAC offices have a structured central vantage point from which to develop and promulgate lessons learned from recurring information technology requirements to include capturing performance data that passed through the contracting vehicles. One

interesting note is that the performance data is generated locally. At this point, no other agency has visibility or convenient access to all past and present performance data generated. With over $13 billion dollars in revenue, to over 95,000 task and delivery orders for information technology procurements, and over sixty GWAC schedules, GWACs have streamlined the procurement process in the IT arena in accordance with FASA. Despite GWACs' growing popularity, questions about bundling have been raised in official investigations and in formal complaints from the Small Business Administration. Are there unfair advantages in competing for these contracts due to over emphasis on best practices? In the end, is the Government getting the lowest-price technically available or responsible responsive, contractor to achieve best value purchases? The next paragraphs look at the controversy surrounding these multiple-award contracts.

E. COMPETITION REQUIREMENT VS CONSIDERATION

The second, and probably most important, claim of GWACs was to promote the spread of best practices, such as performance-based contracting, that promised better results from information technology investments. The argument for why GWACs might help achieve this goal was that GWAC offices would have a central vantage point from which to develop and promulgate lessons learned from recurring IT requirements that passed through the contracting vehicles. Despite this effort, GWACs have not done much to make IT contracting more successful or streamlined, according to Steven Kelman in an article to Federal Computer Week, November 1, 1999.

In a report to Federal Computer Week, October 29, 2001, DoD's Inspector General (IG) indicated that sole sourcing continues to be a problem, despite continuous warnings that these problems could result in limitations being put on the procurement reforms enacted in recent years. The review of Multiple Award Contracts for Services found that 66 of 124 task orders in fiscal year 2001 were issued on a sole-source basis without providing contractors a fair opportunity to be considered.

During fiscal years 2000 and 2001, the DoD IG found that 304 of 423 task orders, or 72 percent, were awarded on a sole-source or a directed-source basis. Only a small number of the 423 task orders were competed and 82 of these orders received multiple bids. He concluded that contracting organizations continue to direct awards without providing multiple-award contractors a fair opportunity to be considered.

> As a result, DOD was not obtaining the benefits of sustained competition and the reduced cost envisioned when Congress provided the authority for multiple-award contracts. (Kelman, 1999)

The Defense Department is not the only organization under fire. NASA was flagged for not competing orders. An audit released in October by NASA's IG found that 51 of 104 contracts issued by the Johnson Space Center and Langley Research Center were sole-sourced orders. "The agency did not receive the benefits of competition and may be paying more for goods and services than necessary," according to the report released September 28, 2001. (NASA, 2001) In response, procurement officials from NASA stated that they agreed with the IG report. However, the orders cited in

the report represent an “effort that was begun, but not completed, on prior contracts.” Putting those orders out for bid would have given those pre-awarded contractors an unfair competitive advantage due to their prior work. These negative impacts have not only affected competition, but also influenced undesirable approaches towards small business concerns.

F. MACS IMPACT ON SOCIO-ECONOMIC POLICY

In a Congressional Report written by the General Accounting Office, small businesses have raised concerns about whether multiple-award contracts would reduce their opportunity to receive Federal contracts. Consolidating requirements, such as awarding large umbrella contracts and eliminating numerous smaller contracts, creates a situation commonly known as contract bundling. Multiple-award contracts have been one way of consolidating requirements, which Federal officials say reduces administrative costs. Small business fears that when consolidation results in very large contracts or contracts that call for performance over a wide geographic area, smaller firms are unable to compete effectively. (GAO, 1998) Before discussing the impact of MACs on small business affairs, the following paragraphs identify the purpose for small business policies categories, and their associated Government programs.

1. Purpose for Socio-Economic Policies

On July 30th 1953, Congress continued in its efforts to strengthen the usage of small businesses by passing The Small Business Act of 1953 and creating the Small Business Administration (SBA). The purpose of this Act was to concentrate entirely on helping solve the many problems that small businesses were facing. The Government realized

that it must help in the development of small businesses in order to promote and keep full and open competition for our free enterprise system. This Act stated that the Government should ensure that a fair portion of Government prime contracts and subcontracts be given to small businesses. This Act abolished the SDPA and the Reconstruction Finance Corporation, and the SBA assumed most of these organizations' functions.

Five years later, The Small Business Act of 1958, Public Law 85-536, amended the original Small Business Act and enhanced the Government's commitment to Small Business by recognizing the Small Business Administration (SBA) as a permanent agency under the Executive Branch. The Small Business Administration was formed as an independent agency that was authorized to enter into contracts with other Federal agencies. Once the SBA entered into these contracts, it would then subcontract these contracts to small and economically disadvantaged small businesses. An amendment to the Small Business Investment Act of 1958 and the Small Business Act of 1958, Public Law 95-507, further addressed socially and economically disadvantaged small business concerns by making it mandatory for prime contractors to submit small business and disadvantaged subcontract goals for contracts over $ 500,000 (one million for construction). These early Acts by the United States Government laid the foundation in addressing the Government's commitment to including small disadvantaged businesses in the Federal Government procurement process. Since then, the Government has continued to show its commitment toward small disadvantaged businesses by enacting the following legislation:

1968 — The Small business Administration 8(a) program was established to enhance federal purchases from socially or economically disadvantaged owners of small businesses.

1969 — Executive Order 11458 established the U.S. Office of Minority Business Enterprise within the Department of Commerce with the purpose of mobilizing federal resources to aid minorities in business.

1971 — Title 41, Federal Procurement Regulations required all Federal contracts exceeding $500,000 to contain a clause encouraging contractors to utilize minority businesses as sub-contractors on a best-effort basis.

1971 — Expanded upon Executive Order 11458 and Executive Order 11625 gave the Secretary of Commerce the authority to: (1) implement federal policy in support of minority business enterprise programs; (2) provide technical and management assistance to disadvantaged businesses; and (3) coordinate activities between all federal departments to aid in increasing minority business development.

1977 — The Public Works Employment Act as amended by Congressman Parren J. Mitchell required that ten percent of each Federal Construction Grant be awarded to minority businesses.

1977 — Public Law 95-89 increased loan authorizations and surety bond guarantee authority to minority businesses.

1977 — The Railroad Revitalization and Regulatory Reform Act required that recipients of financial grants and their subcontractors establish a goal of 15 percent of purchases to be awarded to minority businesses.

1978 — Public law 95-507 mandates that bidders for federal contracts in excess of $500,000 for goods and services and $1,000,000 for construction, submit prior to contract award, a plan, which included percentage goals for the utilization of minority businesses. This law also contained several amendments to the Small Business and Small Business Investment Act of 1958.

1982 — Section 105(f) of the Surface Transportation Assistance Act is the ten percent set-aside amendment sponsored by Chairman Parren Mitchell of the House Small Business Committee. This set-aside provision mandates that not less than ten percent of all funds appropriated over the four-year period (1982-1986) shall be expended with small businesses that are owned and controlled by socially and economically disadvantaged individuals.

1983 — Executive Order 12432, signed by President Reagan, directs all agencies of the Federal Government to develop specific goal-oriented plans for expanding procurement opportunities to minority businesses.

1985 — H.R. 1961, Criminal Penalties for Front Companies, was introduced by Congressman Mitchell to address some of the concerns of those who allege that front companies are injuring minority business programs.

> Under H.R. 1961, any false statement knowingly made to any party for the purpose of obtaining an 8(a) contract, a small business set-aside, a subcontract awarded under Section 8(d) subcontracting plan, or a contract awarded under the ten percent set-aside of the Surface Transportation Assistance Act of 1982, would be a crime punishable by a fine and/or a jail term of five years.

1986 — Public Law 99-661 is a precedent-setting bill requiring affirmative efforts by all Government contractors towards a three-year goal of 5% minority (disadvantaged) business participation in Department of Defense procurement. It provides that:

- "To the extent practicable", each contractor demonstrate full compliance with the intent of the legislation.
- Contractors may pay no more than fair market price (FMP), which may exceed 10% of the market price.

- Contractors may be criminally prosecuted for acts of misrepresentation.
- Contractors must report utilization for all separate groups that make up the protected class of minorities.

2. SBA 8(A) Programs and Goals

The Small Business Administration's Small Disadvantaged Business Office was established to aid in achieving the Government's established goals for small disadvantaged businesses. This office has several minority development programs that are intended to help small disadvantaged businesses become successful in the future. One of the programs is the 8(a) program. The purpose of the 8(a) Program is to promote equal access for socially and economically disadvantaged individuals to participate in the business sector of the nation's economy. In doing so, the SBA encourages business ownership and the competitive spirit for businesses that are owned by individuals who are socially and economically disadvantaged, and to create the opportunity for them to participate in the Federal procurement system. The 8(a) program provides Federal Government contracts and other assistance to small companies owned by socially and economically disadvantaged persons.

The U. S. Small Business Administration (SBA) acts as a prime contractor and enters into contracts with other Federal departments and agencies, negotiating subcontracts with small companies in the 8(a) Program. Generally these contracts have an anticipated award value of less than $5,000,000.00 for Standard Industrial Classification (SIC) codes involving manufacturing and $3,000,000.00 for all other SIC codes and are awarded on a non-competitive basis.

Contracts greater than those amounts are awarded after competition among eligible 8(a) participants.

To be eligible for the 8(a) program, the small business concern must be at least 51 percent owned by an individual(s) who is a citizen of the United States and who is determined to be socially and economically disadvantaged by the SBA. Another requirement is for the business to be managed on a full-time basis by one or more individuals who have been found to be socially and economically disadvantaged. In addition, at least one socially and economically disadvantaged full-time manager must hold the position of President or Chief Executive Officer for the company. For the purposes of the 8(a) program, a socially disadvantaged individual is defined as an individual who has been subjected to racial or ethnic prejudice or cultural bias because of his or her identity as a member of a group, without regard to his or her individual qualities. The social disadvantage must stem from circumstances that are beyond the individual's control. For the purposes of the 8(a) program, economically disadvantaged individuals are socially disadvantaged individuals whose ability to compete in the free enterprise system has been impaired due to diminished capital and credit opportunities as compared to others in the same or similar line of business who are not socially disadvantaged and such diminished opportunities have precluded or are likely to preclude such individuals from successfully competing in the open market. Typically, socially and economically disadvantaged individuals include African Americans, Hispanic Americans, Native Americans, Asian Pacific Americans, and Subcontinent Asian Americans. Individuals not members of these minority

groups who can demonstrate that they are socially and economically disadvantaged also may be eligible.

In an effort to achieve the Federal Government's policy of all small businesses having the maximum practicable opportunity to participate in providing goods and services to the Government, the Government-wide Procurement Preference Goaling Program was established. To ensure that small businesses received their "fair" share, the SBA negotiates annual procurement preference goals with each Federal agency and reviews each agency's results. The SBA is responsible for ensuring that the statutory Government-wide goals are met for the entire Government. The goals for small disadvantaged businesses are as follows:

Table 2. Fiscal Year 2000 Statistics for Small Disadvantaged Business Programs.

The goal for...	is...
small disadvantaged business prime contracts	not less than 5 percent of the value of all prime contract awards.
small disadvantaged business subcontracts	not less than 5 percent of the value of all subcontract awards.
women-owned small business prime contracts	not less than 5 percent of the value of all prime contract awards.
women-owned small business subcontracts	not less than 5 percent of the value of all subcontract awards.

In order for Federal procurement policy to be fair and equitable for all Federal agencies, the Government-wide small business goals are established for Federal agencies as percentages of their annual expenditures. Each agency is required to submit its proposed goals to the SBA. The SBA is then charged to ensure that the aggregate Government-wide statutory goals are met. Currently, the

statutory small disadvantaged business goal is 5 percent of the value for all prime contracts and subcontracts. In addition, the statutory goal is 5 percent for both women-owned small businesses. The HUBZone statutory goal, which is defined in the next section of this thesis, was 2 percent in fiscal year 2001, 2.5 percent in fiscal year 2002, and 3 percent in fiscal year 2003. The SBA approves the final goals that are set by each Federal agency and monitors whether the agency actual performs against the established goals. In accordance with OFPP policy letter 99-1, Federal agencies are required to submit their goals before the beginning of each fiscal year. The Office of Management and Budget is required to establish a system for collecting, developing and disseminating procurement data. This system is the Federal Procurement Data System (FPDS). Accordingly, only data reported to the FPDS on a SF 279 or SF 281 may be included in a Federal agency's baseline for reporting purposes.

In order for SBA to track the goals and actual achievements, Federal agencies each year provide the SBA with estimates of the total dollar amount of all prime contracts to be awarded that fiscal year and estimates of the total dollar amount of all subcontracts to be awarded by the agency's reporting prime contractors. Since fiscal year 1998, all goal achievements were reported through FPDS as both a dollar amount and as a percentage of the total amount to be awarded for each of the categories. At the end of each fiscal year, the head of each agency is required to review its FPDS report for correctness and, if required, submit the appropriate justification to SBA for

failure to meet specific goals with a plan to achieve the goals in the succeeding fiscal year.

3. Mentor-Protégé Programs

Another program the SBA has implemented to improve the opportunities for small disadvantaged businesses to participate in the Federal procurement system is the Mentor-Protégé program. The SBA's Mentor-Protégé program enhances the capability of 8(a) participants to compete more successfully for Federal Government contracts. This is accomplished by encouraging private-sector relationships, and by expanding the SBA's efforts to identify and respond to the developmental needs of 8(a) firms. The Mentors, which are well-established firms in the industry, provide technical and management assistance in the form of technical expertise, resources and other capabilities to 8(a) firms (Protégé). Mentors can also enter into joint ventures with the protégés and compete for Government contracts as prime contractors. A Mentor firm can also assist the protégé by giving it financial support. Mentors can own equity interest of up to 40% in a protégé firm to help it raise capital.

In establishing the Mentor–Protégé program, the SBA hopes to encourage Government contractor firms in good standing to assist small and disadvantaged businesses and enable these businesses to first enter into the Federal procurement process, and then prosper in such a way that they may be able to eventually serve as a mentor for other firms in the future. Since the SBA implemented the Mentor-Protégé program, other Federal agencies have adopted the same program. One such program is the Department of Defense (DoD) Pilot Mentor-Protégé Program. This program

is similar to the SBA's program, but it is unique to the Department of Defense. In this program, DoD encourages major DoD prime contractors (mentors) to develop the technical and business capabilities of small disadvantaged businesses and other eligible Protégés in order to enhance their contribution to the Department of Defense, thereby helping DoD in its efforts to achieve the Federally mandated goals for small disadvantaged businesses.

4. Historically Underutilized Business Zone (HUBZONE) Empowering Contracting Program

The HUBZone Empowerment Contracting program is administered by a staff in Washington, D.C., in cooperation with a field staff located in SBA district offices all around the United States. The program was established in order to provide Federal contracting opportunities for qualified small and disadvantaged businesses located in designated distressed areas throughout the country. Fostering the growth of these federal contractors as viable businesses, for the long term, helps to empower communities, create jobs, and attract private investment in these communities. The program encourages economic development in these historically underutilized business zones, "HUBZones", through the establishment of preferences. The SBA regulates and implements the program and determines which businesses are eligible to receive HUBZone contracts. Next, the SBA maintains a listing of the qualified HUBZone small businesses so that other Federal agencies may locate vendors. In order to qualify for the HUBZone program, a small business must meet all of the following criteria:

- It **must** be located in a "historically underutilized business zone" or HUBZone

- It **must** be owned and controlled by one or more U.S. citizens
- At least 35% of its employees **must** reside in a HUBZone

A "HUBZone" is an area that is located in one or more of the following:

- a qualified "non-metropolitan county" (as defined in section 143(k)(2)(B) of the Internal Revenue Code of 1986) with a median household income of less than 80 percent of the State median household income or with an unemployment rate of not less than 140 percent of the statewide average, based on U.S. Department of Labor recent data
- within the boundaries of federally recognized Indian reservations

In establishing the HUBZone Empowering Contracting Program, the Federal Government has set the following goals for HUBZone: 2001 - 2%; 2002 – 2-½ %; 2003; and each year thereafter - 3%. The main idea is that in achieving these HUBZone goals, the small disadvantaged businesses within the HUBZone would receive a larger portion of Federal Government contracts. If this happens, then it also helps in achieving the overall goal of 5% of all Federal Government contracts being awarded to small disadvantaged businesses.

5. Required Subcontractor Plans For Prime Contractors

One practice that has forced Prime contractors to be cognizant of the use of Small and Disadvantaged businesses in dealing with the contracts they were awarded by the Federal Government is the mandatory subcontractor plans. In accordance with the Public Law 95-507, all Government contracts that are in excess of $500,000 ($1 million for

construction) that offer subcontractor opportunities must contain the contractor's plan for subcontracting with small and disadvantaged businesses. The only exception is if the prime contractor for the contract is actually a small or disadvantaged business. If the Government and the prime contractor are not able to agree on a subcontractor plan, then the prime contractor is not eligible to be awarded the contract.

6. Effectiveness of Small Business Programs

In analyzing the effectiveness of the programs that the Federal Government has implemented to achieve its overall goal of 5 percent of prime contracts and subcontracts for Government procurement actions being awarded to small disadvantaged businesses, the performance of DoD is reviewed.

Table 3. Fiscal Year 2000 Statistics for Small Disadvantaged Business Programs.

Fiscal Year 2000 Statistics for Small Disadvantaged Business Program Prime and Subcontracting Performance Sec. 2323, Title 10 U.S.C. Established a 5% Goal for Column 8								
Dollars in Millions								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Fiscal Year	**Total Prime**	**SDB Prime**	**[2/1] % of Prime**	**Total Subc. Awards**	**SDB Subc.**	**[5/4] % of Subc.**	**[2+5] SDB Total**	**[7/1] % of Total**
2000*	$122,397	$6,957	5.7%	$54,858	$2,962	5.4%	$9,919	8.1%
1999*	$116,715	$7,043	6.0%	$52,232	$2,919	5.6%	$9,962	8.5%
1998	$109,673	$6,530	6.0%	$53,144	$2,984	5.6%	$9,514	8.7%
1997	$106,489	$6,697	6.3%	$54,429	$3,024	5.6%	$9,721	9.1%
1996	$109,489	$6,918	6.3%	$47,353	$2,772	5.9%	$9,690	8.9%
1995	$110,033	$6,682	6.2%	$45,032	$2,600	5.8%	$9,462	8.6%
1994	$112,013	$6,114	5.5%	$45,364	$2,253	5.0%	$8,367	7.5%
1993	$116,007	$6,183	5.3%	$44,947	$1,914	4.3%	$8,097	7.0%
1992	$117,151	$5,195	4.4%	$47,318	$1,777	3.8%	$6,972	6.0%
1991	$125,878	$4,423	3.5%	$57,053	$1,549	2.7%	$5,972	4.7%
1990	$123,821	$4,149	3.4%	$54,708	$1,575	2.9%	$5,724	4.6%
1989	$120,003	$3,998	3.3%	$56,037	$1,302	2.3%	$5,300	4.4%
1988	$130,815	$3,631	2.8%	$58,799	$1,134	1.9%	$4,765	3.6%
1987	$135,340	$3,317	5.7%	$53,115	$1,023	1.9%	$4,340	3.2%

As shown in the table above, in 1987 the Department of Defense (DoD) was well below the stated goals for small disadvantaged businesses, but there was an upward trend. Since 1992, DoD not only has achieved the stated goals, but also has managed, on average, to achieve over 161% of its goals. Looking at this fact, it can be concluded that the policies and programs that the SBA implemented and the DOD followed, were the key contributing factors in the DOD's overwhelming success in surpassing the small disadvantaged business goals over the past nine (9) years. However, further research shows that it is difficult to determine if

there is a direct correlation between DoD's implementation of these programs and the success in achieving the goals. There is insufficient or inaccurate data to correlate successes or failures of meeting SBA goals for the Mentor Protégé' Program and Hubzone initiatives. However, as mentioned earlier, in a 1998 GAO report on Multiple-award Contracts, the Small Business Administration expressed concerns that contract bundling would hamper Small Business initiatives and its ability to meet prescribed goals. On the contrary, GAO concluded that, in the aggregate, across the spectrum of the Federal Government, small businesses are competing and their share of contracts has increased since FASA. Nonetheless, since the report was written in 1998, critics have disagreed.

7. MAC Impacts on SBA Initiatives

Bundling of contracts is a controversial subject with strong opinions for and against the practice. An article written by Colleen O'Hara, in November 1999, states that contract bundling for GWACs (IT MACs) has increased up to 13 percent of all contracts, rising from about 11.5 percent in fiscal year 1992. A Federal Computer Week article, "Tough Times for 8(a)s", September 2000, stated that from 1997 to 1999, the number of small business federal contracts dropped from 6.4 million to 4.9 million. A February 2001, Federal Computer World article stated that Representative Don Manzullo of Illinois, Chairman of the House Small Business Committee, is concerned about contract bundling practices. Advocates state that bundling saves agencies time and money; opponents think that bundling forms barriers to entry into the procurement process. "Bundling acts as a gatekeeper. It essentially locks out

any business that is not an awardee of the bundled contracts," says Craig Brooks, president of Electra International Telecommunications, Bethesda, Md.

There are conflicting objectives dealing with MACs that may produce unwanted economic impacts on Small Business goals. As a result of bundling under MACs, small businesses are at the mercy of larger prime contractors. The work must flow down to them in the form of subcontracts. Further research addresses potential relationships between MAC bundling and the impacts on small businesses and small business initiatives.

G. SUMMARY

Faced with a declining Government workforce of procurement officials, a decreasing industrial base by which to procure supplies and services, fiscal budget constraints and other fiscal barriers, the Government must continue to re-engineer buying practices and improve on best business practices that will continue to place our country in an advantageous position over the long run. Business practices for commercial and non-developmental supplies or services that take up to two years to procure can no longer be tolerated. Multiple-award contract instruments are a step in the right direction that can potentially open opportunities for more competition, better performance and quicker response to Government generated requirements. Nonetheless, despite MAC popularity and the entrance of over 60 additional Government-wide acquisition contracts (IT MACs), current business practices threaten to reverse current processes to the pre-FASA era.

Thus, the potential exists to increase Government overhead costs and raise prices of commercial and non-developmental items, while pushing our already declining commercial industrial base farther away from Government business. Sections 801 and Section 803 of the Defense Authorization Bill loom in the shadows of current bills to swing the procurement pendulum to pre-1994 purchasing. The next chapter discusses and dissects procurement results of specific MAC instruments. The investigations and reports conducted by GAO, the DoD IG and NASA IG give further insight into MAC procurement impacts on competition, pricing and socioeconomic concerns.

III. CURRENT BUSINESS PRACTICES THROUGH MACS

A. PURPOSE

Chapter III evaluates procurement shortfalls of Multiple-Award Task and Delivery Order Contracts (MACs) by revealing the buying habits of Federal Buying Agencies. Over the past four years, increases in sole-source awards have resulted from the use of MACs to include the bundling of contracts to streamline procurement processes. These sole-source awards and bundling impinge on competition, pricing and SBA business goals, and also frustrate the intent of receiving Best Value products and services expected from MAC instruments.

Subsequent paragraphs address successful implementation of MACs, emphasize why buying agencies are gaining confidence in Information Technology procurement solutions, and review the buying habits of agencies within the Federal Government to determine potential misuses of these contract instruments. Agencies within DoD and NASA are the subject of the discussion. Lastly, the researcher addresses and analyzes the effects of contract bundling as defined by Congress in a previous GAO report.

B. POSITIVE IMPACTS OF MACS ON REFORM

Purchases made through GWACs soared to more than $13 billion in fiscal year 2000. (Govexec 2001) More than sixty agencies operate GWACs, and as indicated in Table 1 of Chapter II, have achieved their goal of disseminating the use of GWACs and streamlining processes while reducing procurement administrative lead times. This allows agencies to purchase evolutionary state-of-the-art IT

solutions in less time than pre-FASA procedures. The Defense Acquisition University, the school for Government acquisition professionals in Ft. Belvoir, Virginia, partnered with GSA to use their "Applications 'n' Support for Widely-Diverse End User Requirements" contract, (A.N.S.W.E.R. GWAC). DAU chose the GWAC prime contractor, Computer Sciences Corporation (CSC) to provide integrated e-learning, knowledge management and information technology (IT) support for DAU. The contract award is valued at $47 million with a performance award term (incentive) of an additional three years. Through an interview with Colonel Bill McNally, DAU released the following comments to justify its best value decision using the A.N.S.W.E.R GWAC:

- The A.N.S.W.E.R GWAC matched DAUs requirements more effectively than other procurement procedures such as full and open competition, and Federal Supply Schedules
- DAU did not have to select the contractor based on full and open competition
- The Program Office for the GSA A.N.S.W.E.R GWAC constantly measured performance for the GWAC award and on each task order
- Competition at the initial award and also at the ordering level encouraged high performance
- The A.N.S.W.E.R GWAC met DAU's needs in terms of special provisions, pricing arrangements and incentives (such as award term), etc.
- GSA provided a program office to assist DAU with administering the A.N.S.W.E.R. GWAC
- The A.N.S.W.E.R GWAC allowed one on one dialogue with CSC without creating an unfair advantage to other awardees that facilitated a team relationship that ensured requirements were met (DAU, May 2002)

DAU benefited from the savings of initial startup time and cost, contract administration, which includes the pre-award actions indicated in Chapter II, subparagraph B, page 11, and post award administration. The Government benefited from competition, by allowing the competitive forces of the market place to establish best value pricing based on cost, mission capability, and past performance information. Equally effective, DAU's Task order through the A.N.S.W.E.R GWAC required the prime contractor, CSC, to establish a subcontractor plan to use Small Businesses. As a result, GSA prevented the possibility of bundling contracts as stated in Chapter II definitions and explained in subparagraph F.

C. NEGATIVE IMPACTS OF MACS ON REFORM

Multiple Award Task Order Contracts (MACs) occur when two or more contracts are awarded from one solicitation. This allows the Government to procure goods and services quickly, using streamlined acquisition procedures while obtaining the advantages of competition. The intent of multiple award contracts is to establish a group of pre-qualified contractors that are technically capable of performing the work to sustain competition among the contractors, and to obtain the best value on task orders throughout the contract period. Since multiple award contracts contain broad statements of work and provide the contractors little assurance on actual amounts of orders that will be received, it is crucial that the initial selection process focuses on technical issues. This process allows contractors to compete on an equal footing. When specific task orders are developed with defined requirements, cost and price should be a substantial factor

in the selection process. (DoD Audit) Though FASA authorized Government agencies to use MAC instruments for indefinite delivery, indefinite quantity purchases, many reported misuses of these flexible contracts have eroded the benefits of streamlined processes. The following reports outline these issues.

1. GAO Audit and Findings

a. Scope of Audit

- On September 30, 1998, the General Accounting Office conducted a review of multiple-award contracts awarded by six Federal organizations as directed by the Honorable John Glenn for the Committee on Governmental Affairs United States Senate and the Honorable Carl Levin for the Committee on Armed Services United States Senate.
- The Senate committees sought to find whether Federal agencies were providing a fair opportunity to contractors to receive orders under multiple-award contracts.
- The six agencies included the Defense Information Systems Agency (DISA), the Department of Transportation (DOT), the General Services Administration (GSA), the National Institutes of Health (NIH), and the U.S. Air Force (USAF) Electronic Systems Center’s Hanscom Air Force Base operations (ESC/HAFB) and Standard Systems Group (SSG).

Table 4. GAO Selected Data on Contracts Reviewed.

Awarding organization and program name	Number of contracts	Maximum program value (in millions)	Value of orders as of September 30, 1997 (in millions)
DISA: DEIS-II	6	$3,000	$334.3
DOT: ITOP	20	$1,134	$433.2
GSA: CBGLR	13	$204	$1.6
NIH: CIO-SP	20	$11,000[a]	N/A[b]
ESC/HAFB: MISTS-II	2	$675	$46.9
SSG: DT-V	4[c]	$1,675	$310.2

b. GAO Review Results

- Efforts to provide a fair opportunity to promote competition for task or delivery orders placed under multiple-award contracts varied among the six organizations
- Air Force ESC/HAFB and GSA contracts provided a fair opportunity for orders placed on the organizations' MAC, which amounted to only five sole-source orders out of 37 orders
- Air Force ESC/HAFB contracts were found to logically follow on to orders previously competed. The GSA-requested proposals for offers on projects were generally less in price than the Government estimates
- DOT contracts for information technology services and sole-source orders represented 64% of orders placed and 20% of total dollars awarded in Table 4. Although DOT met statutory exceptions for sole source orders, it did not reach the Office Federal Procurement Policy (OFPP) guidelines of obtaining competition on 90% of its orders.
- Until October 1997, NIH normally identified a preferred contractor when announcing plans to place orders for information technology services on MACs. Although a January 1998 policy changed this system to allow two proposals on each order, a review of ten orders found that the old system had not changed.

- OMB recommended in April 1998 that Federal procurement regulations be revised to prohibit the practice of sole source orders under MACs
- DISA received only one proposal per order for about 44% of the orders placed on its MAC during fiscal year 1997

c. Agency's Response to GAO Review

- OMB, DoD, on behalf of the Air Force, and NIH generally concurred with the results of the GAO report. DOT did not provide written comments but, in oral comments, it generally concurred. GSA also declined to comment.
- OMB is encouraged that agencies are taking steps to improve their processes for administering multiple-award contracts, including increasing attention to the amount of competition for orders. Written comments are included in Appendix A.
- DoD agreed that continual review was important to ensure that MACs promote competition. DoD activities are revisiting current practices to ensure that contracts have a fair opportunity to be considered for orders. Written comments are included in Appendix B.
- NIH stated that the GAO review represented a fair assessment of its MACs. NIH has implemented program improvements to meet "fair opportunity" requirements. See the comments included in Appendix C.

Since the GAO report was published in September 1998, Congress and OMB have closely monitored the use of MACs. The following paragraphs outline departmental audits initiated by DoD and NASA to review internal MAC activities.

2. DoD Inspector General Audit and Findings

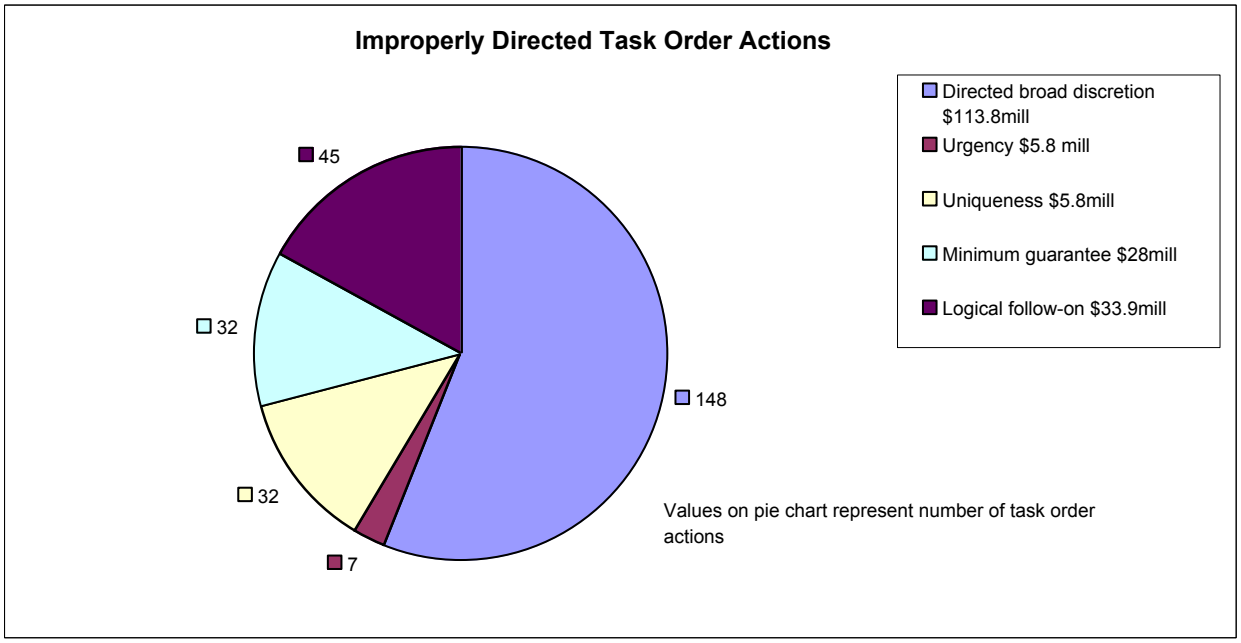

Figure 2. DoD Improperly Directed Task Order Actions.

a. Scope of Audit

DoD reviewed 423 multiple award task orders awarded in FY 2000 and 2001, valued at $451.4 million at fifteen contracting organizations throughout DoD. These orders were from eighty-four MACs with a face value of $9.8 billion.

b. Audit Results

- The audit found that 304 of 423 task orders (72%) were awarded sole-source or on a directed source basis, of which 264 (Figure 3) were improperly supported. The value was $312.2 million dollars.
- Contracting officials abused the "broad discretion" portion of the FAR for task order awards under multiple award contracts
- Contracting officials allowed "exception" claims without adequate supporting documentation and succumbed to program office and internal

pressures to generate business for their multiple award contracts

- Contracting officials did not adequately plan work to ensure that it was suitable for multiple awards
- The Office of the Secretary of Defense Management did not properly monitor, evaluate, or analyze data collected from Military Departments for multiple award contracts to prevent inappropriate practices associated with MACs

c. DoD Agency Management Responses

All of the Secretaries and Directors agreed to the deficiencies noted in the award and use of MACs with the exception of DMEA. DMEA disagreed with the opinion of the auditor that contracting officials did not adequately plan work to ensure that it was suitable for multiple task order awards.

d. DoD Audit Response

The Auditor responded that out of forty-nine task orders, thirteen were called competitive while only receiving one bid, and thirty-six were considered sole-source. They question the use of the MAC because there was never any competition. The MACs were designed to ease the acquisition process for competitors, not to be a means to obtain sole-source procurements.

3. NASA Inspector General Audit and Findings

Table 5. NASA MAC Activity Table.

Center	A. Number of Contracts Reviewed	B. Number of Orders Reviewed	C. Sole-source orders	D. Sole-source orders questioned
Ames	14	88	15	1
Goddard	20	91	13	0
Johnson	17	59	14	11
Kennedy	11	33	9	0
Langley	27	366	90	40
Marshall	6	25	0	0
Totals	95	662	141	52
Awards Values		$352,871,955	$139,843,690	$8,677,950

a. Scope of Audit

- The Inspector General of NASA audited MACs to determine if their use was consistent with statutory and regulatory requirements, and in the best interest of the Government

b. Audit Results

- As indicated in Figure 2, specifically, at Johnson and Langley Space Centers, contracting officers issued fifty-one (49%) of 104 sole-source orders without obtaining adequate competition
- Forty-eight of fifty-one did not qualify as sole-source orders.
- Forty-one were a continuation of work performed under prior contracts.
- Seven orders were follow-on to previous orders
- Three orders had no sole-source justifications available in the contract files. The Government did not benefit from lower prices as a result of the sole-source orders valued at $8,417,611

c. Langley and Johnson Space Center Response

- The period of performance was expiring under the previous contracts. However, the effort involved was not completed.
- The effort required under the orders was consistent with the scope of the new contracts
- The effort required technically complex orders, and competition of the orders would have disrupted critical program milestones

d. Auditor Response

NASA found that the Agency’s rationale for issuing the work as sole-source orders indicates that these contracts were probably not suitable candidates for multiple-award contracts in accordance with FAR Sections 16.504(C)(1)(ii)(A) and 16.504(C)(1)(ii)(B).

- FAR Sections 16.504(C)(1)(ii)(A) states:

The contracting officer must avoid situations in which awardees specialize exclusively in one or a few areas within the statement of work, thus creating the likelihood that orders in those areas will be awarded on a sole-source basis

- FAR Sections 16.504(C)(1)(ii)(B):

The contracting officer must not use the multiple-award approach if only one contractor is capable of providing performance at the level of quality required because the supplies or services are unique or highly specialized

D. EVALUATIVE ANALYSIS OF MAC IMPACTS

NASA and DoD's sole-source awarding of MACs seems to be the norm and not the exception as indicated above. FAR 16.505 allows contracting officers to award sole-source orders to a single contractor under the following exceptions:

- The agency need for the supplies or services is so urgent that providing a fair opportunity would result in unacceptable delays
- Only one award is capable of providing the supplies or services required at the level of quality required because the supplies ordered are unique or highly specialized
- The order must be issued on a sole-source basis in the interest of economy and efficiency as a logical follow-on to an order already issued under the contract, provided that all awardees were given a fair opportunity to be considered for the original order
- An order is necessary to satisfy a minimum guarantee

The following section evaluates the impacts of the ineffective use of MACs on competition, pricing and socio-economic goals. (NASA, 2001)

1. Sole-Source Impacts on Competition

FASA was designed to provide contracting officers some relief from TINA (cost or pricing data), allow broad statements of work, limit contractor protests, and streamline procurement processes through the evaluation of best practices mandating that multiple awardees have a fair opportunity to be considered for orders over $2500. As a result, the Government can benefit from competition and lower prices. MACs were not developed to replace or circumvent full and open competition. In fiscal year 2000, both NASA and DoD processed over 10 billion dollars through GWACs. See Figure 1 in Chapter II. On average, over 60% of the contracts awarded by both DoD and NASA were sole-sourced contracts, thereby violating the competition requirements. Both NASA and DoD rendered numerous explanations as to why they were justified.

Regardless, none of the explanations met the exceptions requirements of FAR 16.505, and the Government did not benefit from the savings normally produced by allowing the competitive forces of the marketplace to dictate prices. However, many agencies use MACs as a way to streamline procurement processes at the expense of the Government. Without oversight or a robust checks and balances system, agencies will continue to abuse the system. Both NASA and DoD auditors recommended appointing an ombudsman for each subordinate agency to review and oversee the use of MACs and meet locally established quotas to benchmark competition. Every subordinate agency opposed this recommendation, stating that this action infringed on a contracting officer’s discretion. Consequently, contracting officers must use adequate market research and

proper acquisition planning to decide if MACs are appropriate contract vehicles. They must use procurement planning to determine if a contractor is technically capable of fulfilling a requirement to prevent overstated/understated amounts based on incomplete requirements. These actions should provide the Government with best value, and a fair and reasonable price.

2. Sole-Source Impacts on Pricing

Agencies should consider the terms, conditions, and competitive pricing, as well as the administrative savings of multiple-award task and delivery order contracts. Agencies are responsible for determining the capabilities of the marketplace, and whether the focus of an existing contract will result in an optimal fit between an agency's needs and commercial solutions. Therefore, although contracting officers may find relief from the Truth In Negotiations Act, under which the contractor is required to submit cost or pricing data through FASA, they must still be cognizant of pricing.

Pricing awareness is achieved in the beginning stages of an acquisition when the requirements are assessed. The acquisition community must first conduct extensive market research to assess what is available in the commercial marketplace to meet the need, with little or no adaptation. Next, the acquisition community creates a winning acquisition and procurement strategy that procures commercial items when they are needed at the most reasonable price. (I. Guide, June, 1998) This is especially important in sole-source exceptions where the competitive forces of the marketplace did not influence price. Market research must answer the minimum questions:

- Should this item or service be considered commercial? If an item is determined not to be commercial, contract procedures will fall under a more lengthy procurement process rather than under simplified acquisition procedures, which account for fair and reasonable prices differently. (I. Guide June 1998)
- Why is the commercial item a sole-source? Items may be sole-source as a result of data rights, copyrights and patents. They may also fall under the exceptions as outlined in FAR Part 16.505. (I. Guide June 1998)
- Is this commercial, sole-source item one of a family of products?
- How many of the commercial sole source items are sold to the general public? If the amount of sales to the Government is higher than the amount of sales to the public, KOs can leverage volume buying to negotiate "most favored customer" prices. If the opposite is true, then market research will concentrate on the public's leverage and compare the Government's price to that of the "most favored general public customer." (I. Guide, June 1998)
- What is the vendor's pricing strategy for commercial items? Two strong factors drive the pricing. The first is the source's assessment of what is the maximum price that the market will tolerate. This is prevalent with competition. In a sole-source environment, market pressures are almost non-existent. The second, cost recovery plus maximum profit, is used in a sole-source environment. (I. Guide June 1998)

A logical follow-on step to market research is price analysis, which is designed to determine if the price of a certain item or service is fair and reasonable. Services for detail price analysis can be requested through the Defense Contact Auditing Agency (DCAA) of the Office of the Secretary of Defense (OSD), and in fact, is highly encouraged. Various methods include Historical Trend

Analysis, Cost Estimating Relationships, Best Value versus Lowest Price, Varying in Quantity Analysis, Independent Government Estimates (IGE), Percentage of Sales Test, Recurring versus Non-Recurring Considerations and Spare Parts Breakout. As noted in the previous section, agencies abused their broad discretion, granted by FAR 16.505, to determine "fair consideration" of awardees, and failed to support their actions by articulating their awareness of pricing for all contractors not contacted before the task or delivery order was issued.

There was no indication that appropriate market research or price analysis was conducted. In one example, where contractors were not contacted to submit proposals, there was no documentation showing that the contracting officer knew the labor mix or labor hours that contractors may have proposed. In 264 of 423 sole-source task orders generated by DoD, and 48 of 104 sole-source task orders generated by NASA, contracting officers failed to use a DCAA auditor or any type of price evaluation techniques to conduct a more comprehensive price analysis. Instead, they used a streamlined approach that was inadequate for determining a fair and reasonable price. As a result, the Government did not realize any cost savings or best value purchases.

3. Impacts on Socio-Economic Matters

Undesirable economic impacts have resulted from MACs. Agencies are taking great advantage of MACs by awarding some contracts that do not define what work is to be done. The agencies are putting enormous pressure on companies by following these practices. These companies are then forced to spend money not only to bid for a MAC, but to also spend

more money to aggressively market themselves to win a share of the contract task orders. In addition, these companies must quickly hire workers when a task order is received and just as quickly lay them off as soon as the task is completed. Managers rightly point out that this is a recipe for worker-employer mistrust, higher wages, and lower quality.

A report by the General Accounting Office in September 1998, to Senators John Glenn and Carl Levin, stated that small businesses have other factors to contend with aside from cost.

> Small businesses have raised concerns about whether multiple-award contracts would reduce their opportunity to receive federal contracts. Consolidating requirements (awarding large umbrella contracts and eliminating numerous smaller contracts) creates a situation commonly known as contract bundling. Multiple-award contracts have been one way of consolidating requirements, which federal officials say reduces administrative costs. Small business advocates, however, fear that when consolidation results in very large contracts or contracts that call for performance over a wide geographic area, smaller firms will be unable to compete effectively. (GAO Report 1998)

While small business advocates have raised concerns about small businesses not being able to compete for MACs, GAO analysis has concluded that in the aggregate, the small businesses' share of Federal contracts has increased since FASA as of 1998. However, there are varying opinions on whether or not small business contract awards have increased or decreased. New York Representative Nydia Velzquez, a ranking member of the House Small Business Committee, had this to report:

- From 1997 to 1999, the number of small-business federal actions dropped from 6.4 million to 4.9 million, which is a 23% decrease
- Twenty-one federal agencies responsible for 96% of all federal contracts were graded from A to F with A being the highest value. No agency received an 'A' rating
- More than half the agencies were given below-average grades for bypassing small businesses in favor of large companies
- Contract bundling has cut into the business of small firms, many of which are owned by minorities or women
- Smaller businesses must enter into subcontractor roles with the larger companies that win bundled contracts. Since bundling leaves small businesses at the mercy of the larger prime contractors, it negates all statutory and regulatory protections
- There is no statutory requirement or penalties if agencies fail to meet goals (Caterinicchia, FCW Sept 2000)

GAO's September 1998 report did not address the impact of MACs on small business opportunities, but concluded that small business opportunities for all types of Federal contracts have increased despite concerns about bundling. The House Small Business Committee concluded that a decline of Federal contracts to small business for IT acquisitions occurred during fiscal years 1997-1999, but there was no conclusive evidence to indicate that MAC bundling was the cause. Neither report addressed whether or not MACs have produced overwhelming barriers to entry for small businesses. However, evidence of MAC misuse through improper sole-source requirements was indeed conclusive. If improper sole-source acquisitions continue, and buying agencies are not held accountable, the Government will not

benefit from competition, and will, therefore, never obtain best value acquisitions that can result in lower or best value prices, and higher performance over the life cycle of the acquisition. In addition, other qualified offerors and contractors, whether large or small, will not have the opportunity to prove their value to the Government if not given a fair opportunity to compete.

E. SUMMARY

Despite the controversy surrounding MACs, the regulations and guidelines are in place to properly award MACs in a full and open competitive environment. A competitive environment will provide an atmosphere that will benefit the contracting officer, the Government, and most of industry. However, contracting officers must properly implement these guidelines before awarding sole-source contracts. Obviously, some manipulation of the system does occur from agency to agency, but that may not be apparent to a casual observer. Agency IG offices and GAO auditors must continue to monitor and ensure that contracting officers understand and adhere to existing polices. Chapter IV introduces alternative business practices through an Advanced Electronic System (AES) followed by an economic analysis comparing MACs and the AES in Chapter V.

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IV. ALTERNATIVE BUSINESS PRACTICES THROUGH AN ADVANCED ELECTRONIC SYSTEM

A. COMMERCIAL TRENDS

The Government is charged with providing a Federal Acquisition System that delivers the best value product or service to its customer on a timely basis, while maintaining the public's trust and fulfilling public policy objectives. (Federal Acquisition Regulation, Part 1) Maintaining public trust can be as challenging as fulfilling public policy in the acquisition system. Streamlining Government procurement processes while adapting Internet solutions that will minimize cost and maximize best value purchases will contribute to maintaining public confidence.

1. Commercial Business-to-Business Practices

Following the success of eBay and Amazon.com, Internet companies moved swiftly into the business-to-business (B2B) market. Internet companies that have built electronic malls on the World Wide Web make it fast and easy for suppliers and buyers within the industry to connect. Web-based transactions are linked to a company's internal accounting and finance systems, and paper forms and ambiguous data entry are no longer a part of the purchasing process. Data is stockpiled and presented on thousands of purchases, enabling organizations to better understand what is being bought and to use that knowledge to negotiate better deals with suppliers. Despite the stock market correction in March 2000, B2B solutions are still considered promising investments. (Harrigan, Sean, 2002)

Figure 3: Overview of the Domestic B2B Market, 1999-2003

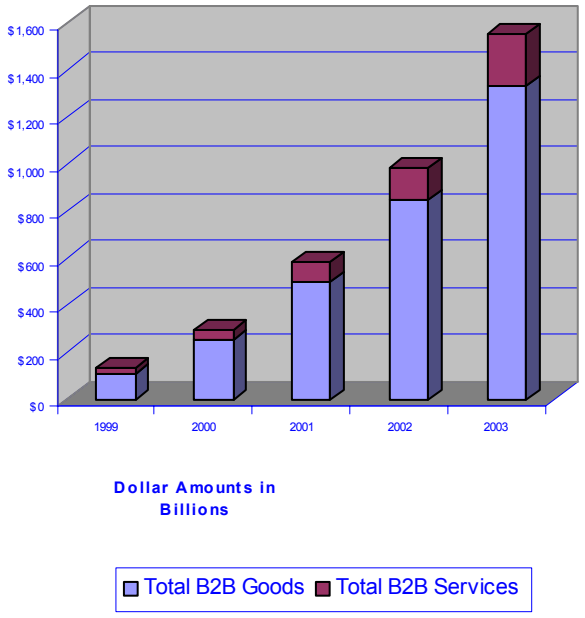

Figure 3. Overview of the Domestic B2B Market, 1999-2003.

The B2B market ballooned because companies can save money by moving the purchasing of manufacturing supplies and operating resources onto the Internet, thereby reducing redundant paper forms, speeding payment and accounting, and improving the ability of buyers to compare prices and the ability of sellers to present products. In addition, the Internet permits real-time bidding wars in which sellers compete on price to win buyers' orders. The Boston-based Aberdeen Group, a consulting firm, found that most businesses realize a 300 percent first-year return on investment in Internet procurement. As a result, B2B firms are now very excited about the business-to-government (B2G) possibilities. (Wyld, 2000)

2. Commercial Business-to-Government Practices

B2Gs are quickly being drawn to the Federal Government's $200 billion+ annual expenditure for goods and services. Most Internet companies collect a percentage of transactions conducted using their websites, software or services. With approximately 31 million procurement transactions in fiscal year 1999 alone, Internet companies consider the Federal Government to be an enormous avenue for profit. Industry analysts predict that Federal, State and local government spending on e-government hardware, software and services will grow from $1.5 billion this year to $6.5 billion in 2005. Nearly $4 billion of that will be spent to enable interactions with businesses. (Harrigan, Sean, 2001)

Figure 4: Public Sector Procurement in Real Dollars, Federal vs. State & Local Government, 1993-1999

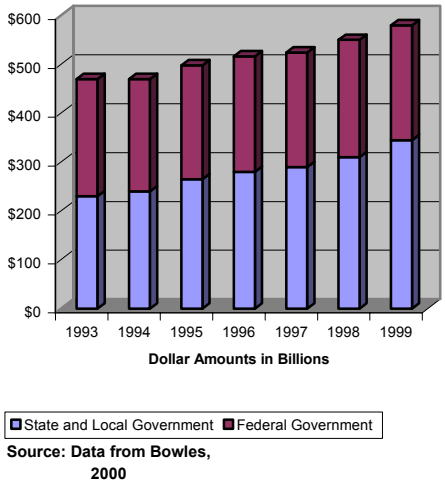

Figure 4. Public Sector Procurement in Real 1999 Dollars, Federal vs. State & Local Government, 1993-1999.

B. GOVERNMENT TRENDS

FASA is a combination of several initiatives in acquisition reform. Many of the reforms in the Act represent significant changes in how companies will be doing business with the Federal Government. Most of the important changes are Electronic Commerce (EC) requirements and the creation of the Federal Acquisition Computer Network (FACNET). Through FACNET, small businesses have easier and more efficient access to Government contracting opportunities throughout the country. Currently, SBA and the Defense Logistic Agency's Central Contractor Registry (CCR) database, which are mandatory small business registry sites, will merge databases to reduce the redundancy in registering as of October 31, 2002. (Central Contract Registry, October 2001)

In 1996, the Clinger-Cohen Act was formed to provide the authority for contracting activities to use Simplified Acquisition Procedures (SAP) for all requirements between $50,000 and $5 million while the Government works to fully implement Electronic Commerce/Electronic Data Interchange (EC/EDI). Commercial customers have always been able to obtain products and services faster and cheaper than the Government. Government customers buying items priced at over $2,500 normally wait at least 45 days to acquire their purchases. As a result of the Internet, the infrastructure is available to mirror commercial practices and current legislation through the Clinger-Cohen Act, which facilitates that process. To remain current in technological developments, the Government must continue to partner with contractors to maintain fluid and dynamic

procurement systems while avoiding obsolescence and providing best value to the Government.

1. Review of Current Procurement Practices

Chapter II described the current procurement practices as a myriad of processes taking in excess of 180 days, or sometimes years, to procure and deliver products and services to the end-users. The contracting office spends costly amounts of time and money advertising the action and preparing formal solicitation documents for each purchase order generated by the end-user. However, with the advent of FASA procurement, offices were permitted to use streamlined processes through MAC instruments, which eliminated the need to advertise and prepare formal solicitation documents for individual requirements.

As a result, MACs reduced procurement administrative lead times (PALT). Despite the successes of MACs in streamlining procurement processes as stated in Chapter III, MACs have been the subject of misuse, as buying agencies used MACs to avoid competition, which negatively impinged on pricing, while marginally meeting socio-economic goals. The Defense Authorization Act Section 803 threatens to reverse the initiatives of FASA by increasing the requirement to compete all orders over $100,000 dollars.

2. Proposed Procurement Practices

Current Internet technology has proven applications in the acquisition environment. However, most electronic contracting systems, such as the NASA SEWP II MAC, GSA Advantage, GSA e-mall, GSA A.N.S.W.E.R GWAC, the DoD EMALL, and other Internet based MACs have attempted to automate existing contracting systems rather than create new

processes and methods for changing the character and nature of contracting that facilitates competition, produces lower prices, and meets socio-economic goals. An advanced electronic system can capture improvements by using the authority of a single prime contractor through a properly structured Single Award Indefinite Delivery/Indefinite Quantity (SA ID/IQ) Contract, which will engage over 207,000 multiple sub-contractors, or vendors as opposed to a few prime contractors under a MAC.

The operational capabilities of the system should include the following:

- Be easy to use by any Internet user
- Be open for use by non-warranted Government ordering officers
- Integrate and expedite Government billing, bulk funding, and ordering and shipping with commercially established systems
- Be adaptable to military exercises and contingency operations
- Be a cradle to grave system that allows the Government to procure goods and services as well as auction or dispose of old and obsolete property
- Allow Small and Disadvantaged businesses to use the system, upload their goods and services, and interact with the Government without having to invest large amounts of capitol in IT related solutions
- Make the system transparent to State, Federal Government, International and Commercial Business purchasers
- Easily capture past performance information from all users of the system while sharing the information with other Government purchasing offices

- Increase the capability to conduct market research
- Automatically generate specific Government forms such as a DD350 (procurement activity report)
- Contain security countermeasures that will discourage fraud and prevent unethical misuse (Tudor Oral Brief Video, 2001)

3. What Is An Advanced Electronic System?

An Advanced Electronic System (AES) is a commercially designed system. It allows the Government to identify the requirements and conduct electronic market research in accordance with commercially established practices. A buyer is able to check over 200,000 vendors through a single Internet site. Once a product or service is selected, the user loads an electronic shopping cart and forwards it to a prime vendor who engages the subcontractor. The process uses a single award indefinite delivery, indefinite quantity (SA ID/IQ) contract that increases competition through extensive consideration of all sources, and reduces procurement administrative lead times from months to weeks. In addition, the customer can use an AES to dispose of Government property using an electronic auctioning system that will sell unusable (but necessary) equipment online while returning the revenue generated from the auction to the customer. An AES is a cradle to grave system enabling contracting officers and ordering officers to procure products and services, and dispose of obsolete inventory while maintaining fiscal discipline.

4. Advanced Electronic System Functionality Description

The following describes the system operations.

a. Requirements Generation and Market Research

If a system user is attempting to purchase office supplies and various other items, the system works in the following manner. The user activates the purchasing system and enters a password. The user is presented with a screen asking whether to buy or sell. The user selects 'buy' by clicking with the mouse. The user enters a descriptive word, such as 'document holder', into the search field. The system returns a listing of all vendors that sell document holders along with a digital photo of their products. The system provides additional information such as information identifying the vendors where all past purchases have been made. The information is presented in graphics such as bar charts that readily present the information in an understandable and cogent manner. Along with this, all the past performance information on the vendors is displayed on a simple one to five rating scale.

This type of information provides a treasure trove for ordering officers to consider all the potential vendors for any particular product or service. This capability is substantially beyond all current Government contracting systems. Every vendor registered under the CCR is accessible in the AES. (Tudor, 2001)

b. Billing and Funding Interoperability

Once the user selects the supplier of the required supplies or services, the shopping cart is forwarded to the resource manager. In a few moments, the shopping cart returns with a fund cite (accounting data) attached. The user forwards the shopping cart to the prime contractor, who in turn, electronically contacts the

various sub-contractors and delivers the orders to them. In a day or two, the user has the capability to click on the shipping button to track the orders. After the orders have arrived and have been inspected, the billing process begins. With the AES, vendors are paid electronically in mere days rather than the multiple months current Governments systems take. (Tudor, 2001)

c. Past Performance Information

After the items have arrived, the system prompts the user to rate the supplier on a simplistic scale of one to five on the transaction. This rating information becomes part of the AES database for all other contracting officers, contracting specialists and ordering officers to review in the future. The advantage of the AES is that all the information is immediately available to any potential user. There is no need to exit the system to find this type of information. In addition, the information is readily accessible at any stage of the purchase process.

If, after the items are used, one fails, the user has the capability to return to the past performance information screen and change the rating from a five to a two or to any other number less than 5. The system modifies the database so that anyone else using the system is aware of the problem with the product. The user can even choose to enter a written description of the problem. The supplier, of course, can respond in the system to the rating and comment. However, the rating and comment remain, along with the contractor’s response, for all to see. (Tudor, 2001)

d. Bulk Funding Capability

A variation on the funding process is to allow users to bulk fund their accounts. This allows the user to avoid the time delay associated with obtaining fund cites. This is especially useful before the end of the fiscal year when time is of the essence. The system keeps track of the bulk fund, constantly informing the user as to the status of funds.

e. Automated Statutory Forms Generated DD350, and Small Business Issues

Each contracting action must be reported at the end of the fiscal year. This requirement takes the typical base support contracting office two labor months to complete each year. This report is processed through the DD 350 form. The AES automates the DD 350 reporting process by using the information generated at the time of the purchase. There is no additional work effort required of any contracting office. This DD 350 is the mechanism by which contracting offices are rated on whether they have achieved the small business set aside goals.

There are many small business issues described in preceding chapters. All of these issues are resolved by the AES system. For example, the problem of using particular set aside categories (i.e., small disadvantaged, women owned, Hubzone, 8A vendors, etc.) is completely satisfied by the AES cascading set asides. A contracting officer designates the particular set asides in a descending priority list. As the purchase of the document holder is processed, the system automatically reviews the first designated set aside category. If there are no vendors available within that category to satisfy the

requirement, the system searches the next group. In turn, if there are no vendors available in that group, the system continues through all the categories until it reaches an unrestricted vendor. (Tudor, 2001)

f. Contingency and Military Exercise Functionality

The DoD is famous for conducting the same exercise year after year. Under normal procurement systems, a contracting officer begins the contracting process to support that exercise approximately six to nine months before it begins. Most of the effort is a repetition of the previous year's contracting activity. The AES records the purchases made the previous year and provides them to the contracting officer. That person in turn can simply review the previous year's purchase, modify it, or select a repeat of the purchases. This reduces the contracting support necessary for a major military exercise down to mere moments.

Another capability of the AES is its potential to track purchases on a real time basis. For example, if a commander is preparing to conduct a contingency operation, he can view all the purchases for support of that operation. He knows when all the items have been purchased, how much in aggregate has been spent on the entire operation, and when the items will arrive in his area of operations. When that operation is completed, the commander can take advantage of the disposal function and sell all the surplus supply items. This money is returned to the commander's fund accounts for usage on other purchases. This capability will relieve tremendous

problems associated with terminating actions in an area of operation. (Tudor, 2001)

g. Procurement For Services

The AES has the capability to order services from multiple vendors. The services can be either negotiated or selected from a pre-defined list of templated services. For example, grass cutting at a base can be easily broken down into square yards with a firm, fixed price per yard. The purchaser then indicates the number of square yards to be cut, the system multiplies it against the pre-submitted prices, and the order is placed with the vendor. This type of commercially based system orders services far faster than any Government based system. (Tudor, 2001)

h. Inventory Tracking

The AES system has inventory tracking ability and alerts inventory managers to any shortages in the inventory. Then, a recommendation is made to the user to purchase an amount necessary to return the inventory to its proper levels. The user has no greater burden other than to accept the recommendation. Since the original purchase was made through the system, there is no search necessary for the restocking purchase. This allows inventory restocking to be performed in mere moments.

C. SUMMARY

This chapter began with an introduction to the concepts of business-to-business (B2B), and business-to-government (B2G) marketplaces and the benefits they provide to both public and private sector organizations. The chapter also reviewed the current procurement practices by outlining limitations of current processes in comparison to the benefits a new system could offer. A detailed

description of the proposed new process followed, beginning with requirements generation, and ending with inventory tracking.

The intent of this chapter was to familiarize the reader with the need for this type of system and a description of the benefits the Government will derive from using the new system. It provides a rough outline of how the system will operate and gives an assessment of the current capabilities of industry to provide this service. The current procurement process is inefficient and cumbersome and provides marginal benefit to the agencies using it. In addition, despite the advances in MACs, they contain weaknesses. As a result, a SA ID/IQ with a commercialized procurement system can improve upon the weaknesses of MACs, while strengthening acquisition reform.

Since this system is theoretical, no data can be extracted to conduct a Net Present Value Analysis, Cost Benefit Analysis or Cost Benefit Evaluation. Instead, Chapter V provides an economic analysis that compares both the behavior of vendors, herein referred to as firms selling within a MAC, and the Advanced Electronic System. The discussion will result in a better understanding of the procurement environment that favorably or unfavorably influences competition and pricing while meeting socio-economic goals.

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V. ECONOMIC IMPACT COMPARING BOTH MACS AND THE ADVANCE ELECTRONIC SYSTEM

A. COMPARING PROCUREMENT PROCESSES THROUGH MACS AND THE ADVANCED ELECTRONIC SYSTEM

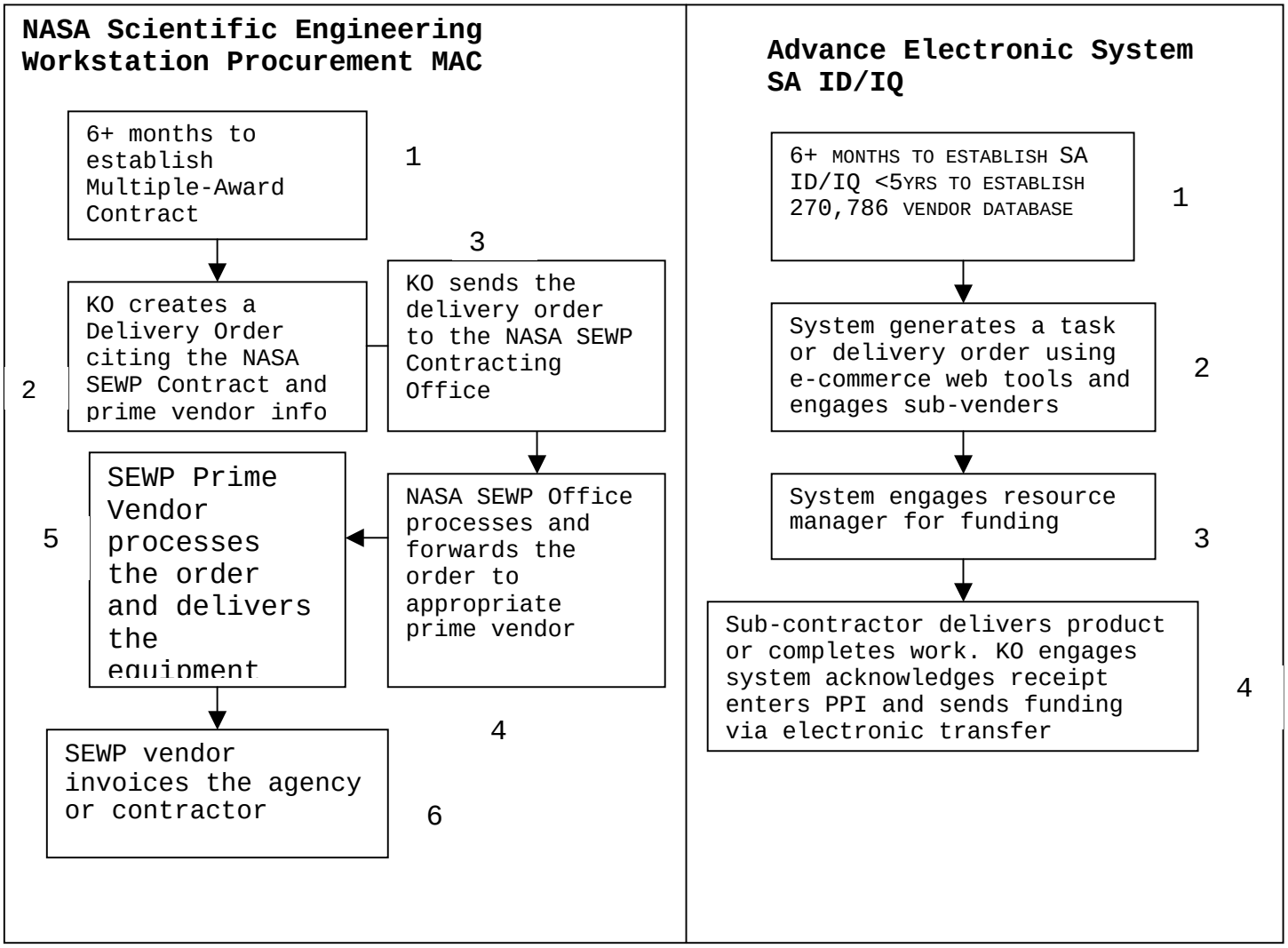

Figure 5. Comparative Chart of the MAC and the Advanced Electronic System.

Both the MAC and AES are ID/IQ contracts that are structured to simplify the purchasing process to acquire commercial-off-the-shelf, non-developmental products and services that are frequently in demand. The major differences between the two systems are simple. MACs have multiple prime vendors with the opportunity to sell to the Government on an indefinite quantity and or indefinite delivery basis. The AES is a SA ID/IQ that allows one prime vendor to engage 273,786 sub-contractors in providing supplies and services on behalf of the Government through an e-commerce system. The AES is a commercial e-commerce system resembling e-Bay, amazon.com, or Ubid.com that can operate in a B2G or B2B environment.

Figure 5 of this chapter demonstrates the procurement stages of both the MAC and AES. (NASA's Scientific and Engineering Workstation Procurement III GWAC was chosen to represent the procurement stages within a MAC.) The SEWP II was one of the few MACs that NASA audited in fiscal year 2000 and that excelled under its scrutiny with no negative findings. The new SEWP III was awarded in July 30, 2001 to twelve prime vendors who will provide computer workstations, servers, and a variety of support peripherals. SEWP III is valued at four billion dollars over a five-year period. Each vendor is expected to deliver orders to the end user within thirty days of an established delivery order. The AES will be awarded for fifteen years, with the potential of achieving a major share of the Government's 200 billion dollar market within five years. Both contracting instruments will initially take at least six months to establish in order to meet the requirements of full and open competition. Once

established, Government end users will be able to procure products in less than thirty days. Each contract instrument serves to streamline procurement processes for Government buying agencies, but vendors will behave differently under each contract; and their distinctive effects on competition, pricing and socio-economic issues will influence the Government’s ability to achieve best-value procurements.

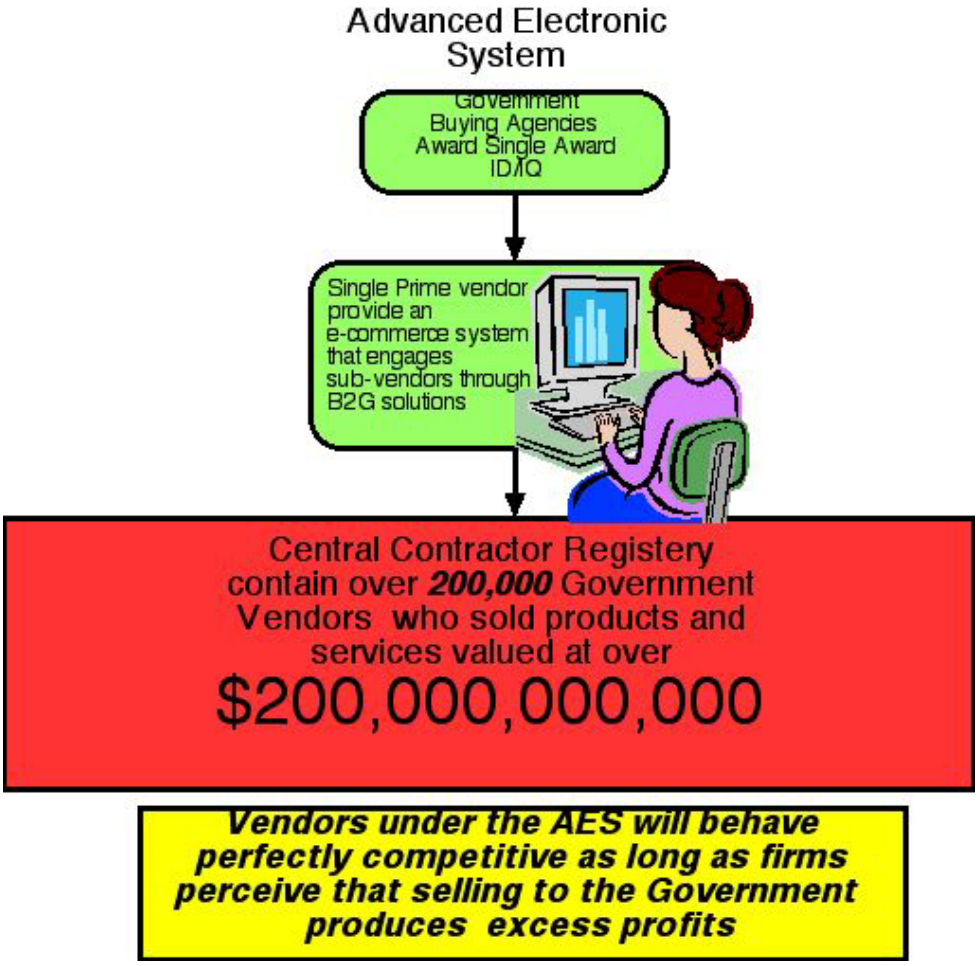

Figure 6. Advanced Electronic System.

B. AES VENDOR BEHAVIOR

Firms will produce the level of output where marginal cost (MC) equals marginal revenue (MR). Firms will always look to maximize profits. Firms are constantly searching for ways to generate revenue to cover fixed and variable costs. More and more firms are discovering that selling to the Government is appealing. During a recent small business briefing by GSA, the researcher spoke with numerous businesses whose commercial affairs were suffering

from the current economic slowdown. Over fifteen firms were new to Government procurement and were attempting to become certified as an 8(a), Hubzone, or small disadvantaged business. As a result, many firms perceive an opportunity to share in profits resulting from Government spending.

Firms selling to the Government using the Advanced Electronic System resemble regular competitive firms. Buyers and sellers, i.e., Government contracting officers and firms, are well informed about the products or services sold. No barriers exist to entering the Government market and all 207,500 vendors within the CCR database will have full access. Firms under an AES producing identical products will have an opportunity to have their products considered by the Government. Contracting officers will be able to fairly consider price and cost, at a minimum, before choosing a vendor. In comparison, the SEWP III contract will be awarded to only twelve firms. This is a fairly normal number for GWACS, but it clearly falls far short of the large number of firms available to the contracting officer under the AES.

Since there are many firms in the industry, no one firm will significantly affect market price, particularly with commercial-off-the-shelf items (COTs). This can be demonstrated with MR. MR is the change in total revenue and total revenue is price times a firm’s output (P X q). As q increases, P decreases. Therefore, the impact of any one firm on market price will depend on the firm’s importance to the industry. Suppose market demand is given by P= 55,000-Q/10. Industry output is 50,000, and industry

price is $50,000. If total industry output is divided equally among all firms in the industry, and one firm doubles output, the impact on market price depends on the number of firms in the marketplace. This is illustrated in the table below. Since the AES will have sufficient firms within its purchasing system, MR does not have to consider any change in P. Therefore, firms can sell as much as they like at the current market price.

Industry Output= # of Industry Firms	50000 Output/Firm	Industry price= Q if 1 Firm Doubles Output	50000 Industyr Price	Change in Price
1	50000	100000	45000.00	5000.00
2	25000	75000	47500.00	2500.00
12	4166.67	54167	49583.33	416.67
1000	50	50050	49995.00	5.00
2600	19.23	50019.23	49998.08	1.92
3000	16.67	50017	49998.33	1.67
10000	5	50005.00	49999.50	0.50

Table 6. Firm's Impact on Price.

Firms under most ID/IQs are Firm Fixed Price agreements that will not allow price increases. Despite the contractual constraints, firms have no incentive under the AES to raise prices. Contracting officers and other buying authorities are required to be well informed of a firm's products as there are many other choices. Under the SEWP III GWAC, only twelve firms sell IT solutions to the Government. Under the AES, there can be as many as 2600+ IT firms. As illustrated in the aforementioned table, one unit of increase for each firm will affect industry price by only $1.92. Most firms, when competing for Government contracts, will price their products below commercial prices assuming that they are producing where MC=MR.

Therefore, there is no incentive to raise or lower prices. Furthermore, unlike other electronic procurement systems, AES is a hybrid system since the prime vendor is allowed to sell B2B, which will draw more consumers, who can purchase at Government-competed prices.

1. Short Run Behavior

Supply and demand will drive the market. Firms are assumed to be price takers since their influence on price is small. Like most commercial firms, they are profit maximizers. In other words, profit maximizing firms will produce where P=MR=MC. When profits (π) are greater than zero, firms will continue to enter the industry as they expect to receive a share of those profits. Since the only requirement under AES is to register under CCR, firms will willingly enter the industry.

Contracting officers are looking for best-value pricing, or a price that will offer the best performing product or service. It is important that the AES assist in market research and pricing analysis as indicated in Chapter III so that current dollars can be spent wisely. Why is this important? The most efficient firms are profitable firms whereas the least profitable firms are less efficient. When a contracting officer submits a request for a quote or proposal (RFQ and RFP), a well informed request will cause firms to perform, produce and enter the industry where MR=MC if $\pi > 0$. Since firms are not required to provide the Government certified cost or pricing data under an ID/IQ contract, it will be difficult for the Government to detect if Government expenditures are being spent on inefficiencies. Market research and price analysis will be a crucial feature in short-run

procurements, and Government Buying Agencies will have to depend on the market place, i.e., AES, to weed out inefficient producers. An IT firm's behavior is described in the following model:

- First, identify the firm's MC curve. MC is the rate of change (i.e., derivative) of Total Cost (TC) with respect to q. TC= Average Total Cost* a firm's output (ATC*q). Thus, ATC= 350/q+500+10q=> TC= 350+500q+10q^2=> MC=500+20q
- The producer's price is P= 300+2Qs (Qd represents the Government's demand and Qs represents the producer's output). The Government's price is P= 2100-Qd. Industry price and output occur where the industry supply and demand curves intersect. Therefore, set producer's price and Government's price equal. 2100-Qd=300+2Qs => 1800=3Q=> Q=600, P= $1500
- Individual firms will operate where P=MC within AES. Thus, given P and the firm's MC: 1500=500+20q=> 1000=20q=> q=50
- Profits are the difference between Total Revenue and Total Cost π=TR-TC => π= (P-ATC)q. From ATC in the model, when q=50, ATC = $1007. Thus, π= (1500-1007)50 = $24,650. Since π>0, firms will continue to enter the Government industry.

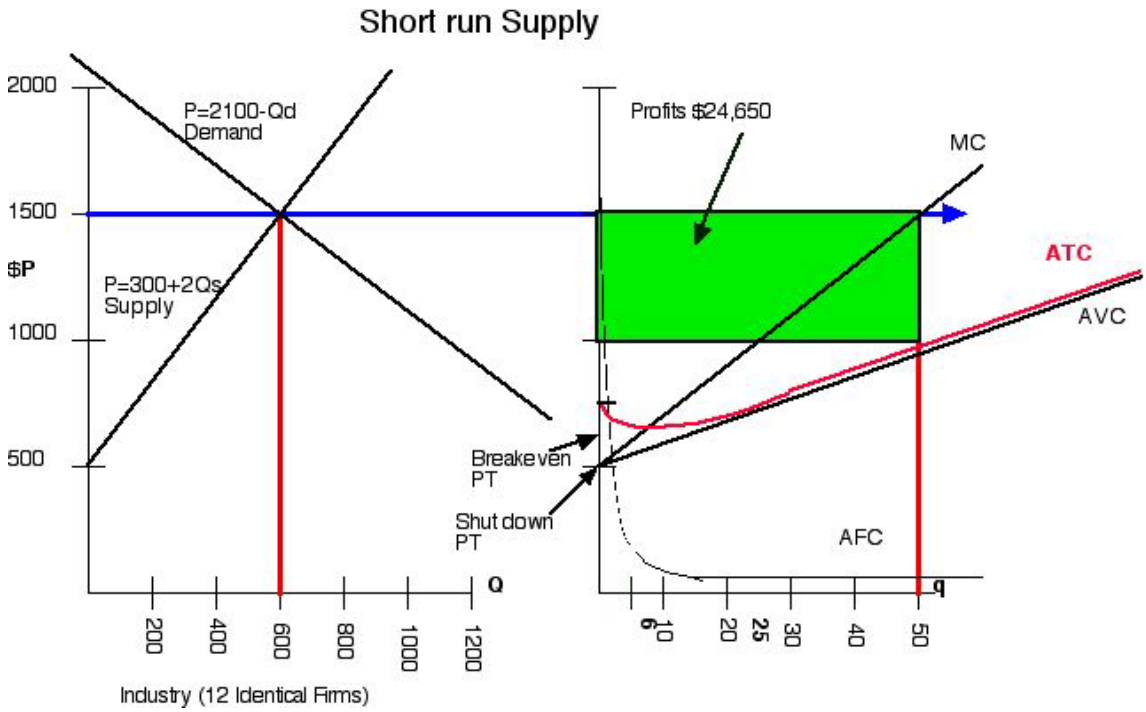

Figure 7. Short Run Supply Model for 12 Firms.

2. Long Run Behavior

The AES under current contractual agreements will operate for at least fifteen years with four option years. The following model demonstrates long run behavior:

- As firms enter the system, excess profits of $24,650 will fall as supply increases. In equilibrium, π=0. π=(P-ATC)q => (618-618)*6 =0
- When Qs = Qd, firms maximize π, and π=0, the industry is in long run equilibrium

As firms maximize P=ATC=MC at the breakeven point, 350/q+500+10q=500+20q=> q= 5.92, P=$618, Qd=1482. Long run equilibrium can support 247 firms.

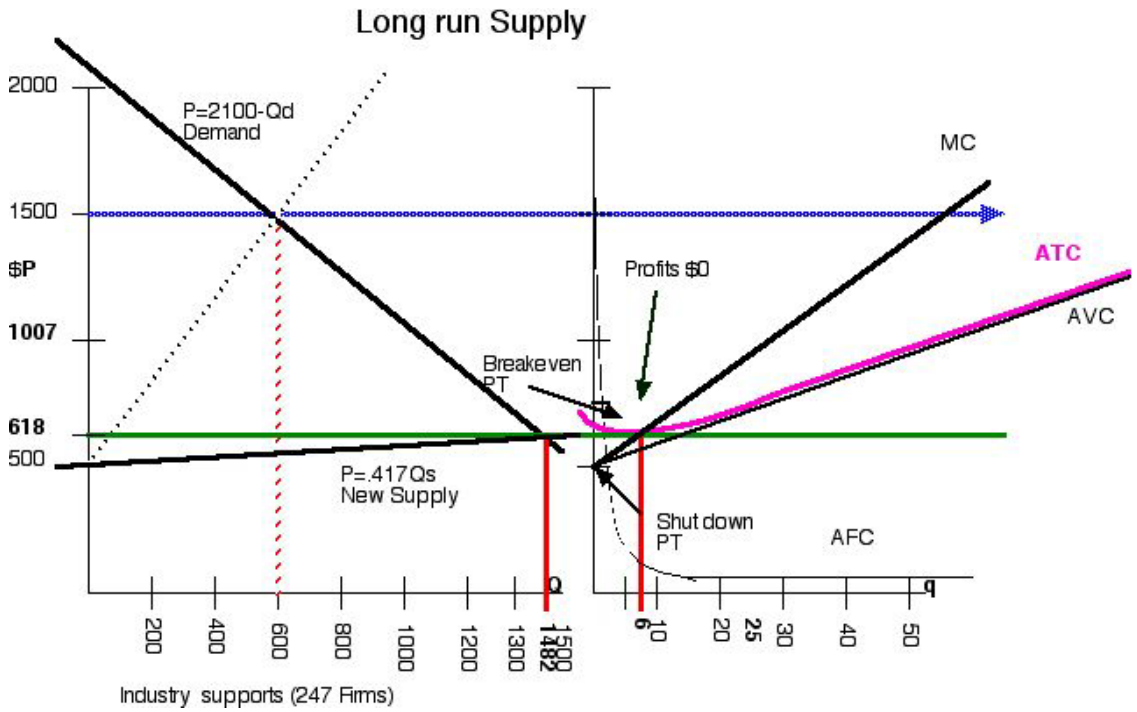

Figure 8. Long Run Equilibrium.

As mentioned previously, firms perceive that Government purchasing provides excess profits. However, the opposite is true. No excess profits exist. Government buyers will purchase commercial or non-developmental items in larger quantities from fewer firms and those non-producing firms will quickly exit the Government market and re-enter the commercial market or simply go out of business. Therefore, the frequent entry of newer firms and the exiting of non-performing firms will occur. There are currently more smaller firms entering the Government market than larger firms; therefore, long run equilibrium will affect small businesses the most. To date, 184,334 small businesses are selling products and services to the Government. This accounts for over 89% of Government procurements. This number is expected to increase. (Pro-net Helpdesk, 2002) Many firms, mostly small business

firms, look to Government procurements to offset their inability to maintain profitability in the commercial industry as a result of the recession.

Small firms, through SBA, designate themselves as 8(a), Hubzone, or small disadvantaged businesses to compete for procurements of <$100,000 that are set aside for small business by law. (Far Part 19.5) As 184,000 small business firms compete for a limited pool of set asides they will quickly compete away the profits produced by these set asides. Profits will decrease to zero and small firms will exit the Government industry.

As a result of perfectly competitive behavior, firms producing for the Government within the AES meet the criteria for technical efficiency. Thus, for firms to stay in business, they must control costs to produce or provide those products and services. Those firms that control cost will remain and provide the best value in the long run. As noted in Chapter III, contracting officers from DoD and NASA injected barriers that prevented the Government from experiencing optimal production through unprecedented sole-source task and delivery orders. The contracting officer's behavior in this instance restricted input markets and prices, which prevented the market from adjusting properly. An AES will benefit the Government by not restricting input markets and input prices from adjusting, while allowing Government buyers to maximize utility and allowing output prices to adjust. An AES can produce efficient output, allowing contracting officers to make best value decisions as the system permits perfectly competitive behavior.

C. MAC BEHAVIOR

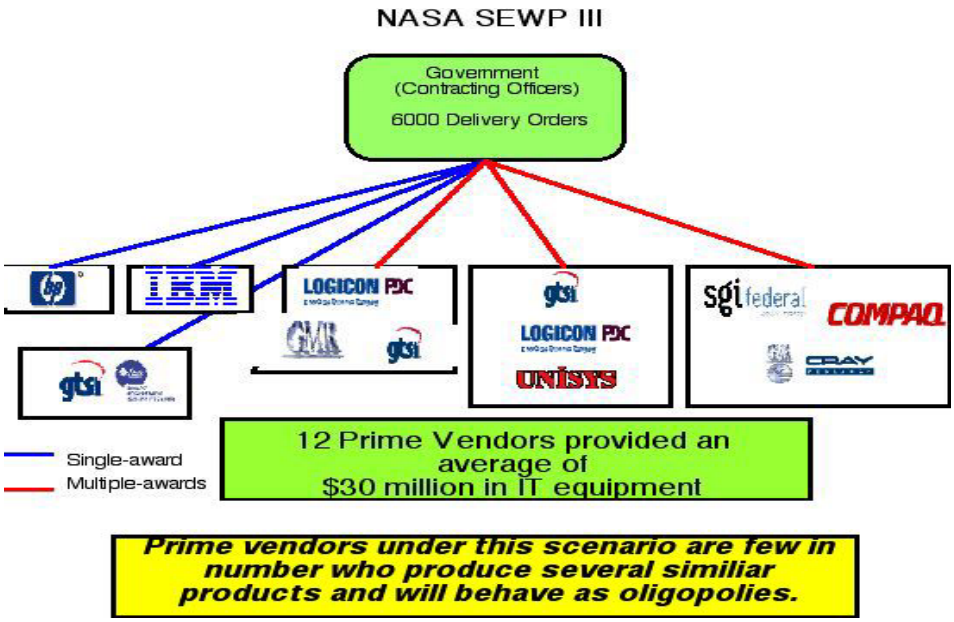

Figure 9. NASA SEWP III MAC.

1. Game Theory

Within a multiple award environment, only a few firms produce many slightly different products. Firms within MACs will behave as oligopolies. Like firms within perfect competition and monopolies, they too want to maximize profits and will produce where MC=MR. So, what is the difference? This is the only model in which strategic interactions are crucial. MAC firms are few in number and they will affect the MR curve. They have all competed and have been awarded the opportunity for further task and/or delivery orders from Government buyers. As members of an oligopoly, firms can monitor a competitor's actions and determine whose actions increased or decreased prices within the market. Since strategic interactions are involved between firms, no one model exists that can

capture all behavior. In fact, to graph MR would be difficult. One of the most popular ways to understand firm interactions is through Game Theory. Game Theory is the theory of optimal decision making with two or more decision makers. In the case of the NASA SEWP III MAC, there are twelve independent decision makers, all with conflicting objectives. Game Theory assumes that each decision maker is rational and seeking to maximize his outcome. Each side has a decision variable it controls, but the outcome of the decision making effort depends on the choices made by all sides. The objectives of the opposing sides are considered to be strictly conflicting in that a gain for one side must lead to a loss for the other. Two of the many game strategies within Game Theory are MAXMIN or MINMAX. This is normally seen when firms bid or submit proposals for awards. Game Theory is also useful in studying interactions between firms to win task or delivery orders. Firms will respond to the actions of their competitors by deciding whether to advertise, lower prices, offer discounts and rebates, etc., to win a share of the Government's dollar. For example:

- Firm A and Firm B are two of ten firms awarded a GWAC, but Firms A and B have yet to win a task order under the award. Firms A and B must raise awareness of their product or service to achieve needed revenue for the firm; however, the firms will attempt to raise awareness only if it is advantageous to do so. Both firms are independent and assumed rational in their thinking. Each firm's objective conflicts with the objective of the other firm. Assume Firm A has decided on price and is deciding whether to advertise. Its decision will depend on the effects on sales. Assume Firm B decides whether to lower prices. Its decision will depend on the effects on profits. There is very little

difference between each firm's products; therefore, some aggressive actions must be taken to win future task orders.

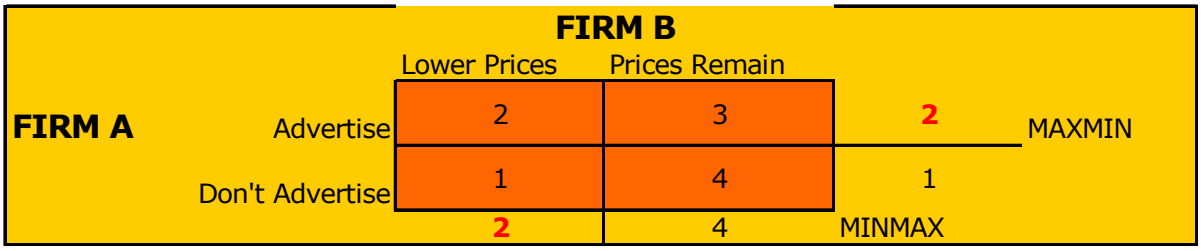

Figure 10. Game Theory MAXMIN, MINMAX.

- The most commonly assumed strategies are MAXMIN and MINMAX
- With MAXMIN, a firm maximizes the minimum payoff it gets, that is, the payoff when the other firm acts to give the first firm its worst outcome.
- With MINMAX, a firm attempts to minimize its opponent's maximum payoff while its opponent attempts to maximize his own payoff.
- Firm A picks course of action **2** that maximizes its minimum possible payoff. In other words, Firm A is pessimistic because it assumes that whatever action it takes, Firm B will take the action that gives Firm A the lowest possible payoff.
- Firm B, choosing MINMAX, picks course of action **2** that minimizes Firm A's maximum possible payoff. Firm B is optimistic because it assumes that whatever action it takes Firm A will take the action that gives Firm B the highest possible payoff.
- When MAXMIN and MINMAX are equal there is a saddle point or pure optimal solution that optimizes the best use of both firms resources indicated by **2.**

- Firm A’s optimal strategy will be to advertise as it will gain the most with minimal impact to resources
- Firm B’s optimal strategy will be to lower prices as it stands to lose the least by avoiding doing nothing at all

The model in Figure 10 is a simplistic display of how firms interact with each other within a MAC environment. Firms may also assume that their competitors would continue doing what they were doing despite their actions, as in the Cournot-Nash theory. Nash is the winner of the Nobel Prize in Economic Science portrayed in the movie “A Beautiful Mind”. As a result of different assumptions, oligopoly models may arrive at different long run equilibrium prices. KOs, as they generate requirements for procurements, should be aware of how firms behave so as to apply appropriate business practices that will offer firms incentives to produce, price and perform most advantageously for the Government.

2. MAC Sole-Source Task and Delivery Orders Produce Monopolistic Behavior

The Government, through its contracting officers, has the ability to influence a firm’s behavior within a buying relationship. As discussed in Chapter III, contracting officers use their influence and broad discretion to select sole-source task and delivery orders within DoD and NASA. DoD sole-sourced 62% of its task orders while NASA sole-sourced 46% without demonstrating some type of price awareness to determine fair and reasonable pricing. As a result, firms no longer mimic oligopolies; firms behave like monopolies. However, firms' behavior in a sole-source task or delivery order environment do not necessarily resemble strict monopolies. Here is why. First, sole-

source firms under MAC task or delivery orders can not charge the highest price the market will bear. In fact, MACs prohibit firms from raising prices, but allow firms to lower prices.

Second, under MACs the KO still has a choice to buy from other MAC awardees despite the fact that the KO chose in many cases not to. In a true monopoly the KO has no choice for there is only one firm; therefore, the KO becomes a price taker. However, as a result of a task or delivery order the KO remains the price setter. The KO set the price ceiling during the source selection process prior to awarding the MAC. In the case of the NASA SEWP III MAC there are twelve awardees; therefore, entry into and exit from the industry as a result of sole-source task or delivery orders are not necessarily blocked. In fact, the sole-source firm is well aware of the other eleven and will be obliged to lower prices, deliver timely products and services, and perform above and beyond expectation to maintain its sole-source relationship with the KO.

Finally, KOs must remain aware that sole-source task or delivery orders do not save Government resources. That is, sole-source firms will marginally lower prices only to maintain a sole-source relationship. The sole-source price will be higher than competitive quotes from the other eleven firms; therefore, the savings resulting from the difference between the sole-source price and the competitive price will never be realized by the Government. KOs are not only charged with buying on behalf of the Government, but also are also charged with freeing Government resources that can be used elsewhere to minimize

public expenditures. As a result of poor spending practices reported by the DoD IG and NASA IG, over $320 million is no longer available to be used elsewhere.

The same behavior can be seen through contract bundling of multiple award ID/IQs, which increased 19% during the last ten years. GAO in its September 1998 audit maintained that there is not enough evidence to suggest that bundling is a problem, while SBA claimed an annual loss to small business of $13 billion dollars per year from bundling. Somewhere between 0 and $13 billion lies the truth. Regardless, the AES will minimize SBA's concerns over the unintended consequences of bundled contracts as bundling is virtually nonexistent within AES. Small business firms will have the same opportunities as larger firms without having to wait for larger firms to share Government business through sub-contracts and manage the cost burden of competing and making large capital investments just to enter a Government system with no guarantee of award. Instead, the AES encourages smaller firms to optimize resources to compete along side other firms for position based on merits and capabilities.

D. SUMMARY

Chapter V discussed the behavior of firms within the multiple-award environment and the Advanced Electronic System. Firms are influenced to behave competitively within the AES, while firms responded as oligopolies under properly executed MACs, and somewhat monopolistically when awarded on a sole-source task order basis. Further discussion revealed that the AES met the criteria for technical efficiency as firms behaved perfectly competitive and produced where MC=MR. Lastly, properly structuring

contractual agreements to give firms an incentive to produce the desired output is key to best value selections. When KOs use improper business practices, firms have the incentive to charge only those prices to maintain sole-source relationships with marginal outputs as demonstrated with sole-source MAC task and delivery orders. Chapter V demonstrates that the AES has the greatest potential for achieving the appropriate levels of competition and pricing while meeting socio-economic goals.

VI. CONCLUSION AND RECOMMENDATIONS

A. CONCLUSION

As addressed in Chapters I and II, procurement procedures were described as lengthy, inefficient and highly regulated, thereby preventing the end user from receiving timely products or services that perform to end user standards. Also, Chapters I and II defined and discussed the advent of FASA and other policies to improve Government business practices resulting in the development of streamlined contract instruments and procedures. MACs and GWACs are the products of post 1994 legislation that quickly gained popularity across all Government buying agencies allowing contracting officers to streamline procurement processes from years to under a month for commercial, commercial off-the-shelf and non-developmental products and services. However, buying agencies used these streamlined procedures to not only reduce procurement administrative lead times, but to circumvent competitive practices, which negatively affected small business concerns, pricing and competition. The consequences of this noncompetitive behavior resulted in Congress directing DoD, the Federal Government's $200 billion buyer, to issue a final ruling on implementing Section 803 of the National Defense Authorization Act for Fiscal Year 2002 on October 25, 2002 to all DoD agencies. (See 67 Fed. Reg. 65505)

The rule reverses contracting officer's broad discretion to fairly consider all MAC or GWAC awardees prior to issuing a task or delivery order. In fact, the rule requires contracting officers to receive at least

three offers for task orders greater than $100,000. (News Brief no. 02-10-2, 2002) In fiscal year 2001, MACs generated revenue of over $60 billion. Consequently, if the minimum requirement is not met, the burden on the Government could increase to 600,000 more contract actions, which will increase costs, increase procurement administrative lead times, over burden an aging and declining acquisition workforce, and produce higher prices for the Government. (Dembeck, 2002)

If the Federal acquisition system is to mirror commercial practices and embrace reform as not just another blinking word, it must re-engineer procurement processes that allow the public dollar to flow freely within the Government Marketplace. AES is the operational tool that can address a strategic change in re-engineering procurement. As analyzed in Chapter IV and V, AES introduces a less regulated business alternative that will allow the Public's dollar to flow more freely within the marketplace while preventing much of the negative influences of contract bundling and sole-source awards while optimizing the Government expenditures. Despite the potential for procurement re-engineering, AES will be short lived if it does not identify a "Champion" to minimize the threat of political stakeholders who oppose and may threaten the survivability and progress of AES. Potential opposing stakeholders include GSA, whose FSS system is subject to Defense Authorization Bill Section 803, and Office of the Secretary of the Navy Research, Development & Acquisition, whose SEAPORT system is one of many eMalls and DRMO operations.

Stakeholders that will gain the most from the AES are the major military buying commands within DoD who are the requirement generators and users of the products, and SBA who has often voiced dissatisfaction with Federal procurement practices as mentioned in previous chapters. As demonstrated by the life cycle model on Figure 12, the benefits of AES can become easily clouded among the plethora of current electronic systems. To overcome this dilemma, a Champion must support the system. (Haga, 2001) The Champion, i.e., the person with the greatest mix of power, whether political or intellectual, must leverage that power to minimize the negative impacts from stakeholders with conflicting objectives while selling the benefits of this system to those who need it. In addition, AES must be supported by a robust marketing plan that will target innovators, such as SBA and the major military buying commands who stand to gain from this system.

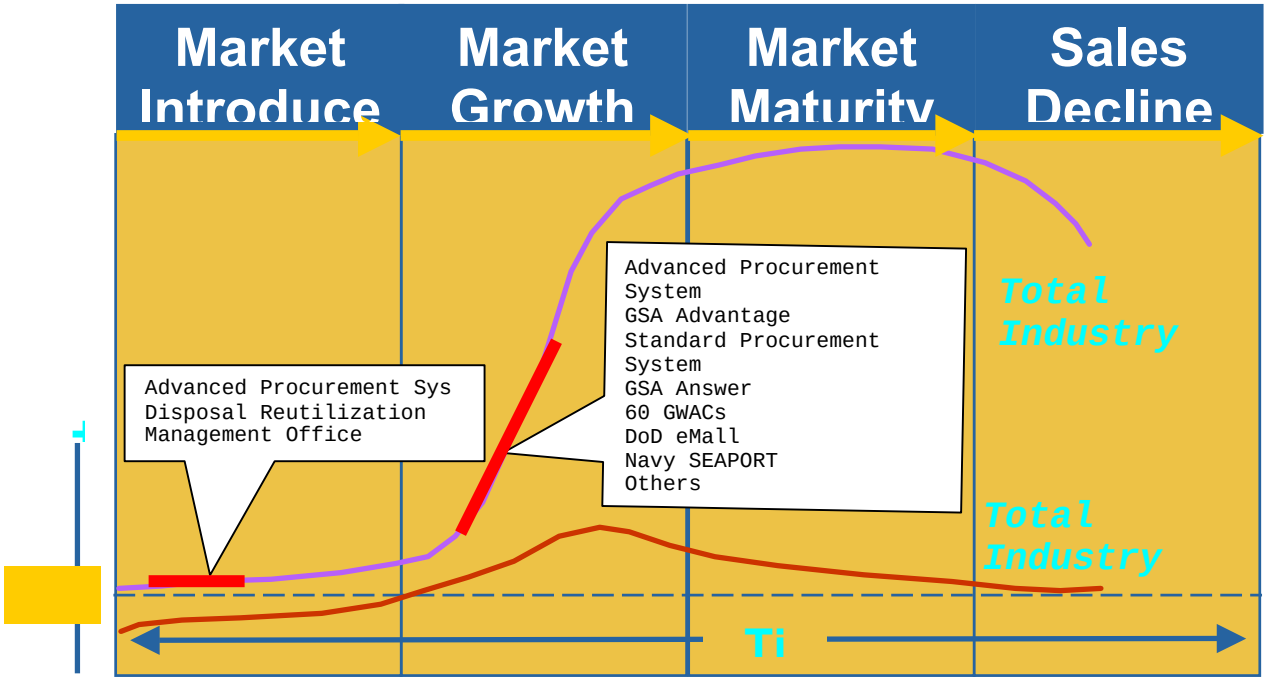

Figure 11. Life Cycle Model Relative to Other Systems.

B. RECOMMENDATIONS

The key to minimizing the risk of stakeholders with conflicting objectives is to rely heavily on implementation of a robust Marketing Plan, which can be effectively achieved through Marketing Management. The Program manager or Contracting Officer Technical Representative (COTR) will benefit from the following actions:

- Verify the Naval Postgraduates School's strategic direction and implement a Marketing Plan that supports it
- Establish a Marketing Management Team through the Naval Postgraduate School Resources. Team should include Strategic Management and Marketing Professors for oversight.
- Reexamine and validate a previous marketing plan authored by MBA students as a guide for future marketing requirements
- Establish an integrated product team (IPT) through the MBA program to perform a Business Case Analysis that will capture and establish the proper metrics and account for the Total Ownership Cost (TOC) of the program. The team should include:
  - Financial Expertise
  - Information Technology Expertise
  - Strategic Management Expertise
  - Contracting and Contract Law Expertise
  - Major Military Buying Command Input
- Gain product creditability and began involving political stakeholders early through the use professional publications targeting innovators such as SBA and their political advocates as well as major military buying commands:
  - Articles in professional acquisition magazines
  - National Contract Management Agency

- Government publications
- Professional Conferences
- Naval Postgraduate School Website
- International Magazine
- Direct contact with users
- Institute for Supply Chain Management

Quickly identify a “Champion” for the program and establish advocacy early. Candidates are Senators or Representatives of SBA over site committees, Senators and Representatives of the Prime vendor responsible for creating AES.

C. SUMMARY AND REVIEW OF RESEARCH QUESTIONS

1. Primary Research Question

- What are the current acquisition problems and issues associated with current procurement practices of MAC instruments to meet the requirements of competition provide best value prices and meet socio-economic goals? To what extent can an advanced electronic system improve on those procurement problems and issues?

Chapters I and II explicitly reinforced the fact that the present procurement practices for commercial, commercial off the shelf, and non-developmental products and services take too long to procure and deliver to the end user. The contracting office spends costly amounts of time advertising the action and preparing formal solicitation documents for each purchase order generated by the end-user. This translates to higher administrative costs, higher prices and at times marginal performance.

The AES is a commercial system with Government unique features with ease of use similar to Amazon.com, ebay.com, Ubid.com, etc. The system engages a SA ID/IQ contract

allowing the Prime vendor to interface with suppliers for a fee for service. As a result, the Government receives its goods or service in less than thirty days. In addition, the system allows the user to dispose of Government property through an auction function that not only reduces overhead and inventory cost for the Government, it allows the Government user's activity to retain revenue from the sale. AES is a cradle to grave system that allows buying agencies to maintain fiscal discipline while producing best value procurements.

2. Secondary Research Questions

- Why have Government-wide Acquisition Contracts (Type of MAC or GWAC) become the procurement tool of choice for a plethora of Government agencies?

Since FASA was passed in 1994, MACs have generated over $60 billion in revenue. MACs' popularity derives from the fact that full and open competition is no longer required for multiple awardees as long as task and or delivery orders fairly consider all awardees without prejudice. Current standards for delivering products and services to the end user is less that thirty days as indicated in Chapter V by NASA SEWP III standards. MACs have become popular because they reduce the burden of administration by bundling requirements for buying agencies, which has led to great controversy within the legislative branch and Small Business Advocacy Groups. As a result, more regulations under Defense Authorization Bill Section 803 have imposed additional competition requirements. Lastly, Buying Agencies offering MACs to other Federal Buying Agencies are retaining fees for services to manage task or delivery orders for prospective users.

- Why has the misuse of these GWACs become a political target for Congress and the Small Business Administration (SBA)?

Buying Agencies have used MACs not only to streamline full and open competition, but also to avoid competition. Unintended consequences have resulted. As described in Chapter III, the DoD IG discovered that 72% of task orders were inappropriately sole-sourced. The NASA IG contended with 49% of its task orders, with a total dollar value of over $320 million, not follow appropriate procedures. Agencies within DoD and NASA did not perform any market or price analyses to justify the costs, and as a result, the Government did not benefit from the potential savings of the purchases.

Lastly, the advent of contract bundling has caused uproar within SBA and small business advocacy groups (even though the GAO contends, in a 1998 report on MACs, that the Federal Government has maintained its socio-economic goals and that there is no supporting evidence that bundling has caused any negative affects on small businesses as whole). The SBA insists that for every 100 bundled contracts, small business lose 60. As a result, small business has lost $13 billion a year in revenue. With small businesses being over 179,000 out of 207,000 of the Government's supplier base, the lack of competition and the discriminating affects of bundling have raised congressional concerns over the Government's dwindling industrial base.

- What advantages/solutions can an advanced electronic system bring to the current procurement system and Acquisition Reform?

Vendors are required to register with the Central Contracting Registry to sell to the Government particularly

DoD. An AES using the CCR data, results in small businesses not having to make large investments in capitol or IT infrastructure. In comparison, MACs typically cost vendors as much as $200,000 just to formally respond to a solicitation, which will not guarantee an awarded contract.

As indicated in the Chapter V, each of these systems will cause different economic behavior. Under AES, vendors will behave perfectly competitive, thereby allowing quantities of supplies and services to be procured efficiently. Sole-source MACs behave like monopolies. As a result, MACs have become over regulated. MAC vendors set prices as high as the market will allow while the Government deprives itself of any savings associated with competitive behavior. AES allows the dollar to flow freely as if it is operating in a commercial market place. As a result, the mass entry of vendors through the CCR creates an incentive to control cost, which allows efficient firms to remain and inefficient firms to exit the system. The Government benefits from competition through lower prices, bundling becomes unnecessary, full and open competition is satisfied, and best value decisions become the norm and not the exception.

D. RECOMMENDATIONS FOR FURTHER RESEARCH

This exploratory study has only begun to uncover the growing body of knowledge on E-commerce and the potential of the Internet to facilitate Government acquisition. Important areas for further research are:

- Legal issues for internet procurement for the Government
- Financial models supporting efficient E-Government procurement

- Security for E-Government surrounding authentication and electronic signatures.
- Accountability and reporting issues concerning the AES
- Analysis of the effectiveness concerning the NPS research contract

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APPENDIX A. LETTER FROM OMB

Appendix II

Comments From the Office of Management and Budget

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

OFFICE OF FEDERAL PROCUREMENT POLICY

September 15, 1998

Mr. David E. Cooper
Associate Director
Defense Acquisitions Issues
General Accounting Office
Washington, DC 20548

Dear Mr. Cooper:

I have been asked to respond on the Director's behalf to your August 14, 1998 request for OMB comment on your draft report on multiple award contracts (MACs). We appreciate the opportunity to review this report. MACs represent one of the most promising vehicles of acquisition reform and are being used to satisfy a growing number of agency needs. My office is firmly committed to ensuring that agencies make effective use of the many benefits offered by these vehicles -- especially the ongoing streamlined commercial-style competition possible under these contracts and the innovation and value that competition induces.

MACs have become a key agency buying tool for a variety of reasons. As your report explains, MACs generate competitive pressure within the vehicle through a process where contract holders are given a fair opportunity to be considered for specific requirements through streamlined ordering processes. This competitive pressure brings about better prices, higher quality, and more timely delivery of goods and services. By giving agencies access to multiple qualified contractors, MACs enable agencies to take advantage of advances in technology and changes in agency priorities in a more cost-effective and timely manner. MACs also offer agencies the opportunity to exercise leverage, increase operational efficiency and reduce administrative costs by consolidating requirements. We cannot overemphasize how critical these benefits are to agencies operating in an environment of limited resources. We hope readers of this report will appreciate this point.

Since the codification of the MAC authority by the Federal Acquisition Streamlining Act, OFPP has actively promoted their effective use. We are encouraged that agencies are taking steps on their own to improve their processes -- including increasing attention to the amount of competition obtained for orders awarded under these vehicles. To reinforce this result, the Acting Deputy Director for Management of OMB, in an April 21, 1998 memorandum, requested that the President's Management Council assist in ending the practice of designating a preferred source. At the same time, my office requested that the Federal Acquisition Regulatory Council initiate a case to prohibit agencies from using this practice.

While we do not have specific comments on your report at this time, you should note that we view the efforts taken to date (including those identified in your report) as first steps in an ongoing process of continual improvement in using MACs (both intra- and inter-agency) to help the government meet its mission in a timely and effective manner. We will expect agencies to make effective usage of all single, multi-agency, and government-wide MACs (including those not addressed in your report) a top priority and are actively exploring additional ways to stimulate their strategic use.

We would welcome the opportunity to meet with you and discuss these issues further. Thank you again for allowing us to comment on this important subject.

Sincerely,

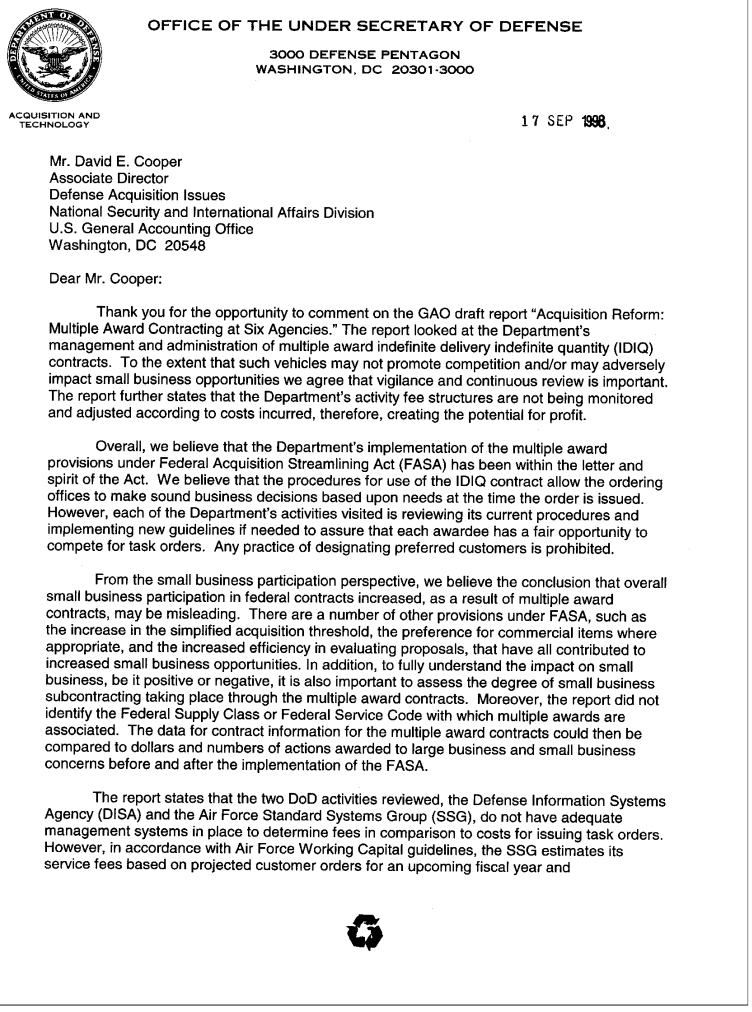
Deidre A. Lee
Administrator

APPENDIX B. LETTER FROM DOD

Appendix III

Comments From the Department of Defense

Note: GAO's comment supplementing those in the report text appear at the end of this appendix.



OFFICE OF THE UNDER SECRETARY OF DEFENSE

3000 DEFENSE PENTAGON
WASHINGTON, DC 20301-3000

ACQUISITION AND TECHNOLOGY

17 SEP 1998

Mr. David E. Cooper
Associate Director
Defense Acquisition Issues
National Security and International Affairs Division
U.S. General Accounting Office
Washington, DC 20548

Dear Mr. Cooper:

Thank you for the opportunity to comment on the GAO draft report "Acquisition Reform: Multiple Award Contracting at Six Agencies." The report looked at the Department's management and administration of multiple award indefinite delivery indefinite quantity (IDIQ) contracts. To the extent that such vehicles may not promote competition and/or may adversely impact small business opportunities we agree that vigilance and continuous review is important. The report further states that the Department's activity fee structures are not being monitored and adjusted according to costs incurred, therefore, creating the potential for profit.

Overall, we believe that the Department's implementation of the multiple award provisions under Federal Acquisition Streamlining Act (FASA) has been within the letter and spirit of the Act. We believe that the procedures for use of the IDIQ contract allow the ordering offices to make sound business decisions based upon needs at the time the order is issued. However, each of the Department's activities visited is reviewing its current procedures and implementing new guidelines if needed to assure that each awardee has a fair opportunity to compete for task orders. Any practice of designating preferred customers is prohibited.

From the small business participation perspective, we believe the conclusion that overall small business participation in federal contracts increased, as a result of multiple award contracts, may be misleading. There are a number of other provisions under FASA, such as the increase in the simplified acquisition threshold, the preference for commercial items where appropriate, and the increased efficiency in evaluating proposals, that have all contributed to increased small business opportunities. In addition, to fully understand the impact on small business, be it positive or negative, it is also important to assess the degree of small business subcontracting taking place through the multiple award contracts. Moreover, the report did not identify the Federal Supply Class or Federal Service Code with which multiple awards are associated. The data for contract information for the multiple award contracts could then be compared to dollars and numbers of actions awarded to large business and small business concerns before and after the implementation of the FASA.

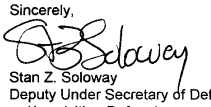
See comment 1.

The report states that the two DoD activities reviewed, the Defense Information Systems Agency (DISA) and the Air Force Standard Systems Group (SSG), do not have adequate management systems in place to determine fees in comparison to costs for issuing task orders. However, in accordance with Air Force Working Capital guidelines, the SSG estimates its service fees based on projected customer orders for an upcoming fiscal year and

then makes appropriate adjustments (up or down) in subsequent fiscal years in order to maintain a "no-profit" status. DISA's fee structure is in accordance with the Defense Working Capital Fund, which adds a customer charge sufficient to recover operating costs associated with the business area. We believe these guidelines provide an efficient and effective means to monitor and manage costs such that profits are not generated.

FASA provided contracting officers the latitude to establish procedures for the solicitation and award of task orders under IDIQ contracts. I believe that most of these have been established in a manner that promotes competition and the inclusion of small business at the prime and subcontract levels. However, as problems are identified, the Department will take appropriate steps to address them.

Sincerely,



Stan Z. Soloway
Deputy Under Secretary of Defense
(Acquisition Reform)

APPENDIX C. LETTER FROM NIH

Appendix IV

Comments From the National Institutes of Health

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

National Institutes of Health
Bethesda, Maryland 20892

SEP 14 1998

Mr. David E. Cooper
Associate Director, Defense Acquisition Issues
United States General Accounting Office (GAO)
441 G Street. NW, Room 4A48
Washington, D.C. 20548

Dear Mr. Cooper:

Thank you for providing the National Institutes of Health (NIH) an opportunity to review the GAO draft report entitled, *Acquisition Reform: Multiple-Award Contracting at Six Agencies*, GAO/NSIAD-98-215. It provides a fair evaluation of the multiple award contracts offered by the NIH to acquire information technology services. We have, however, implemented program improvements and modifications that we believe should be cited in your final report in the areas referring to the NIH InformationTechnology Acquisition and Assessment Center (NITAAC) program. These improvements and modifications are described in detail in the enclosed comments.

Should your staff have any questions, please ask them to call Mary Jane Meyers, Office of Management Assessment, at 301-402-8482.

Anthony L. Itteilag
Deputy Director for Management

Enclosure

**NATIONAL INSTITUTES OF HEALTH INFORMATION TECHNOLOGY ACQUISITION AND ASSESSMENT CENTER (NITAAC)
COMMENTS ON
GAO DRAFT REPORT: MULTIPLE-AWARD CONTRACTING AT SIX AGENCIES (GAO/NSIAD-98-215)
SEPTEMBER 2, 1998**

The National Institutes of Health (NIH) has had an opportunity to review the GAO Draft Report on Multiple-Award Contracting at Six Agencies. We have implemented various program improvements, and would like to offer the following modifications and clarifications on portions of the report focusing on the National Institutes of Health Information Technology Acquisition and Assessment Center (NITAAC) program. We believe that some of these improvements should be cited in areas of the report referring to the NITAAC program.

Fair Opportunity to Be Considered (Competition)

NIH would like to make the following specific suggestions to the Draft Report:

- Top of Page 5 – the word "preferred" should be changed to "Suggested/ Recommended." Page 4, last sentence should read: ***"After we began our review, NIH changed its procedures and now requires that at least two contractors be identified when a Suggested/Recommended contractor is designated."***

- Page 5, para. 2, last sentence should read: ***" NIH has modified its ordering procedures to eliminate references to preferred contractors and is considering a range of other initiatives to promote broader competition for orders."***

As indicated in NITAAC's initial comments on the GAO's Draft Statement of Facts, NIH is considering numerous approaches to enhance competition. Below are some of the modifications that have been implemented:

- NIH has met with all vendors on NITAAC's three multi-award contracts and explained the elimination of the use of preferred vendors when ordering. In furtherance of this, we have modified ordering procedures and informed all customers of the elimination of the practice of using preferred vendors. We have also removed the suggested/recommended sources language from our guidelines. Since the removal of this language from our contract, we have noticed an increase in the number of proposals being submitted on task requirements.

- We have also allowed vendors to add five additional subcontractors to their contract teams over the life of the contract, and to continue to add subcontractors on a task order by task order basis. In addition to increasing competition, this will also help meet small business goals.

- On a daily basis we educate customers about the importance of obtaining maximum competition under NIH Multiple Award contracts in accordance with FAR Subpart 16.5 relating to *Competition Under Multiple Award Task and Delivery Order Contracts*. We work with customers to structure statements of work and ensure language that will promote competition, and lead to best value acquisitions. Customers are also referred to our guidelines that discuss fair opportunity in the ordering process.

- We conducted an all hands vendor meeting on June 8, 1998 to stress the importance of competition under the NIH contracts. This was the first of a series of brainstorming sessions we intend to conduct with our vendors in an effort to increase competition. The competition issue is also discussed at the Industry Advisory Council meetings, which are held on a monthly basis.

- Since July, 1998 we have required that Statements of Work be competed for a minimum of five days rather than two days as originally required.

Management System Improvements

NIH makes the following specific suggestions to the Draft Report with respect to our management systems:

Now on p. 7.
See comment 1.

- Addition to Page 6, Footnote d – NIH would like to add the following sentence to the end of this footnote: ***"However, within NIH's modified system, all data will be captured ensuring complete, and consistent data on all orders."***

Now on p. 8.

- Modification to top Page 7, second sentence – ***" To address this problem, NIH is developing an integrated system that, as it is phased-in, will provide complete, consistent data on all orders."***

Now on p. 8.
See comment 2.

- We request that the information below be included on Page 6, para. 3:

  Phase I – *CIO-SP and Image World Internal Tracking System* was completed in April, 1998. Phase II – *Internet Tracking System* entails NITAAC's ECS-II and Image World electronic ordering and financial management modules. The ECS-II electronic ordering system was operational as of June 1, 1998. The Image World delivery order process, and financial modules are currently being beta tested. Phase III – *Integration* will combine NITAAC's CIO-SP, IW, ECS–II, and financial management modules into an overall complete system.

Small Business Contract Awards

NIH makes the following specific suggestions to the Draft Report with respect to Small Business inclusion:

- Modification in last sentence on Page 8, para.1 – ***"NIH officials attributed the decline in awards to small business in part to acquisition reform and regulatory revisions."*** (See Attachment I, NIH Acquisitions FY 1992 – FY 1997.)

Now on p. 9.

- Table 3 on Page 8: Contract Awards to Small Business by Selected Contracting Offices – Fiscal Years 1994 and 1997 should be changed for NIH as follows:

  -- The "$467.3" listed under FY 97 for Awards to Small Business should be changed to "$454.0". (See Attachment I)

Now on p. 10.

Page 9, para. 2, second sentence should read:

NIH considered small businesses in its acquisition planning phase of awarding the CIO-SP contract. Subsequently, the CIO-SP contract was awarded based on full and open competition. Twenty contracts were awarded including 18 to large business and 2 to 8a companies.

NIH encouraged small business participation by establishing subcontracting goals and targets to ensure inclusion of small businesses. The established subcontracting goals targeted small business 10 percent, small disadvantaged business 5 percent, and woman owned business 5 percent. All large businesses on the CIO-SP contract agreed to the subcontracting goals in approved subcontracting plans.

Scope and Methodology – APPENDIX I

Now on p. 17.

NIH would like to make the following change to APPENDIX I, Table I.1: "Selected Data on Contracts Reviewed", Page 12, Footnote a: ***"The NIH contracts provide for a maximum of 5,000 tasks under the program, and as of July 8, 1998, have a contract ceiling of $11 billion."***

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